

TRAFFIC SPEED REPORT NO.87

NOVEMBER 1969 – NUMBER 32



BY

S.S. HEJAL

JHRP

JOINT HIGHWAY RESEARCH PROJECT

PURDUE UNIVERSITY AND
INDIANA STATE HIGHWAY COMMISSION



TRAFFIC SPEED REPORT NO. 87

To: J. F. McLaughlin, Director
Joint Highway Research Project

From: H. L. Michael, Associate Director
Joint Highway Research Project

November 18, 1969

File: 6-3-3

Project: C-36-100

The attached Progress Report No. 87 on Traffic Speeds is the report of the 1969 study of free-flowing automobile and truck speeds on rural, tangent, level sections of Interstates, other 4-lane and 2-lane highways in Indiana. The study and report have been performed by Mr. Salim S. Hejal, a Graduate Instructor in Research on our staff, under the direction of Professor Michael.

The results indicate an increase of about .14 mph in the average speed of all passenger cars and an increase of about .07 mph for all heavy trucks to those speeds noted in the 1968 study. A regression analysis of the speed data for the past eleven years indicates that the speed trend for all classes of vehicles on all classes of highway studied is an increasing one. Average speeds for passenger cars over all classes of highway have increased 1.03 mph annually and for all heavy trucks over all classes of highway the increase has been 0.77 mph annually.

Copies of this report are requested for release to the Indiana State Police, the Indiana Traffic Safety Council and the Indiana Office of Traffic Safety, as is normal procedure for these reports. Copies will also be sent to the Bureau of Public Roads and several Departments within the ISHC. The report is presented for the record and for release as noted.

Respectfully submitted,

Harold L. Michael
Harold L. Michael
Associate Director

HM:maz

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Progress Report

TRAFFIC SPEED REPORT NO. 17

by

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Joint Highway Research Project

File No.: 8-3-3

Project No.: C-36-10

Purdue University
Lafayette, Indiana
November 18, 1969

ABSTRACT

This report is the annual summary of the speed and volume of rural Indiana highways. The data are for the year 1960, and are for the interstate, the state route, and the county route systems. The data are for the months of July and August, 1960.

Analysis of the speed and volume data for the year 1960 shows that the average speed of passenger cars was 47.0 miles per hour, and the average speed of trucks was 41.0 miles per hour. The average speed of the three types of vehicles was 44.0 miles per hour.

A regression analysis of the data for the year 1960 shows that the average speed of passenger cars was 47.0 miles per hour, and the average speed of trucks was 41.0 miles per hour. The average speed of the three types of vehicles was 44.0 miles per hour.

TRAFFIC SPEED REPORT NO. 87

This report is an analysis of spot speed observations made during July and August 1969. All observations were made of free-flowing vehicles on level, tangent sections of rural Indiana highways during daylight and under favorable weather conditions. The same locations on selected Federal and State highways as used in 1968 were used again. Most of these locations have been the same for many years. Stations were classified as - two lane, four lane, or interstate highways. A representative sample of traffic speeds was obtained at each of the four stations in each classification. The specific site in each station was as follows: (see Figure 1.)

Interstate Highways

1. I-69 3.3 Miles South of Junction of S. R. 10
2. I-69 1.0 Miles West of Junction of S. R. 10
3. I-74 1.0 Mile East of Junction of S. R. 10
4. I-65 2.9 Miles North of Junction of S. R. 10

Four Lane Highways

5. U. S. 31 1.2 Miles South of Junction of S. R. 10
6. U. S. 31 1.0 Mile East of Junction of S. R. 10
7. U. S. 31 1.0 Mile North of Junction of S. R. 10
8. U. S. 31 1.0 Mile West of Junction of S. R. 10

Two Lane Highways

9. U. S. 41 1.0 Mile North of Boswell
10. S. R. 43 2.0 Miles South of Grubers
11. U. S. 31 3.0 Miles South of Rochester
12. S. R. 25 0.7 Miles West of Americus

The vehicles were classified as passenger cars or trucks. Passenger cars were further classified into two groups - Indiana or Non-Indiana and the analysis was performed as thus classified and combined. The trucks were also classified into two groups - Light (less than 5000 pounds gross weight) or Heavy (equal to or more than 5000 pounds gross weight), and again the analysis was performed as classified and combined.

The maximum speed limits in Indiana are as follows: 70 miles per hour on interstate highways and 65 miles per hour on other highways, unless otherwise posted. The stated maximum speed limits were applicable at all interstate, four lane and two lane stations of this study.

Equipment and Field Procedure

The observations for this report were obtained by use of an "Electromatic" Radar Speed Meter, built by Automatic Signal Division, Eastman Industries, Inc., East Norwalk, Connecticut. The meter was placed approximately four feet from the edge of the pavement at an angle less than 10° with the highway center line. Speed inaccuracies are negligible at small angles (less than 10°) and therefore, corrections for angle were unnecessary.

At the beginning of the study the accuracy of the meter was checked; a constant discrepancy of minus two miles per hour was found and hence all readings of speed were corrected accordingly.

Results of Analysis

The data collected were analyzed and are summarized in Tables 1 to 12 in the Appendix. Tables 13, 14, and 15 summarize the data for the three types of facilities: interstate, four lane, and two lane. Table 16 is the summary for all facilities observed.

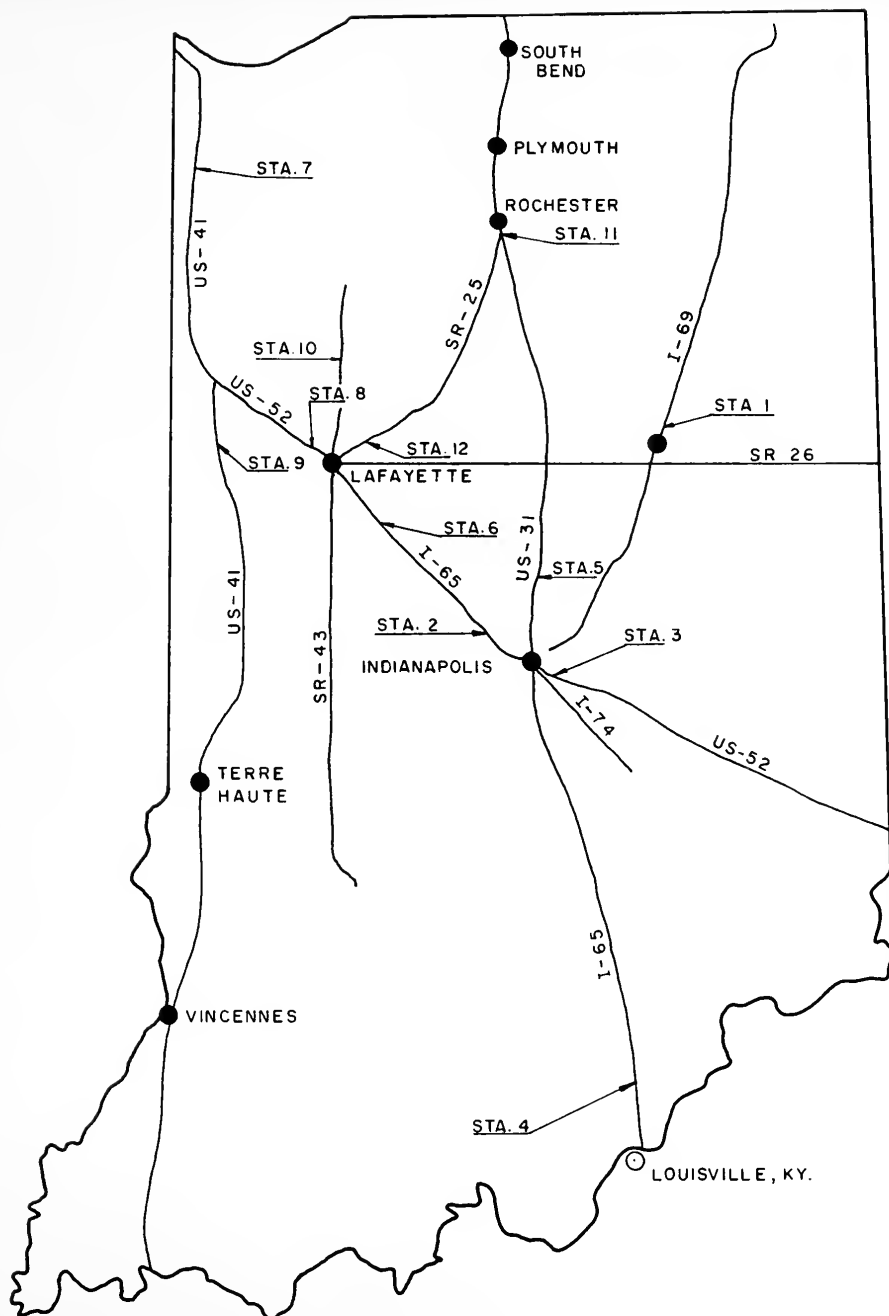


FIG. A - LOCATIONS OF SPEED-STUDY STATIONS

Figures 1 to 16 in the Appendix show the accumulative speed curves for each of the stations studied.

The average speed for each classification of vehicles on each type of highway for this study was as follows:

	<u>Interstate</u>	<u>Four Lane</u>	<u>Two Lane</u>
<u>Passenger cars:</u>			
Indiana	70.2	67.7	64.7
Non-Indiana	71.2	68.3	64.6
85 percentile (all)	76.6	74.6	71.9
<u>Trucks:</u>			
less than 5000 lbs.	69.3	64.0	60.5
5000 lbs. or more	59.9	58.0	55.9

The percent of vehicles exceeding the speed limit for each classification of vehicle and each type of highway was as follows:

	<u>Interstate</u>	<u>Four Lane</u>	<u>Two Lane</u>
<u>Passenger cars:</u>			
Indiana	48.9	65.4	45.0
Non-Indiana	57.6	70.1	45.4
<u>Trucks:</u>			
less than 5000 lbs	17.1	50.1	24.5
5000 lbs. or more	5.5	23.2	6.7

The percent of vehicles traveling 5 miles per hour or more above the speed limit for each case was as follows:

	<u>Interstate</u>	<u>Four Lane</u>	<u>Two Lane</u>
<u>Passenger cars:</u>			
Indians	20.6	36.6	22.5
Non-Indians	25.0	36.7	21.0
<u>Trucks:</u>			
Less than 4000 lbs.	10.4	18.5	15.7
5000 lbs. or more	0.8	2.0	1.0

The results of this study and similar studies conducted since 1959 are tabulated in Table A. A linear regression analysis on these results was conducted and a summary is given in Table B.

The hypothesis $\beta = 0$, where β is the slope of the linear graph of speeds versus year (annual trend), was tested and it turned out significant for all classifications at the 5% level. A second hypothesis $\beta = 1.0$ was tested to draw limits on the annual trend. It was not significant for all the 9 cases, that is the slope is not significantly different than 1.0 mph/year for a 5% level of significance. Finally, the hypothesis $\beta = 1.5$ was tested, it was significant for all cases except for the 85 miles of interstate passenger cars.

A graphical representation of tables A and B is given in Figure B.

TABLE A
SUMMARY OF SPOT SPEED OBSERVATION
ON INDIANA HIGHWAYS

(Free-Moving Vehicles on Level, Tany. on Section)

		Passenger Cars					Trucks	
		Ind. Mean	Non-Ind. Mean	All Mean	All Std.	Ind. Mean	Non-Ind. Mean	
Two-Lane Highways								
Aug.	'59	55.6	55.5	55.5	62.2	55.5	48.0	
Sept.	'60	55.7	55.6	55.6	62.0	55.6	49.1	
Aug.	'61	55.2	55.7	55.9	62.2	55.7	50.1	
Aug.	'62	55.7	57.4	57.0	63.7	55.7	50.1	
June	'63	56.9	57.7	57.2	64.0	56.9	49.5	
July	'64	57.1	60.1	59.5	65.0	57.1	52.4	
Sept.	'65	58.2	57.9	58.1	64.0	58.2	51.7	
Sept.	'66	57.1	59.3	59.3	65.5	57.1	52.0	
Aug.	'67	57.0	61.3	61.3	68.0	57.0	52.7	
June	'68	57.2	61.0	61.0	68.1	57.2	52.8	
July	'69	57.7	64.8	64.7	71.9	57.7	57.6	
Four-Lane Highways								
Aug.	'59	57.3	62.2	60.1	64.5	57.3	49.5	
Sept.	'60	57.5	62.2	59.7	65.5	57.5	52.0	
Aug.	'61	57.6	67.3	67.5	73.5	57.6	52.0	
Aug.	'62	58.2	69.3	69.3	73.8	58.2	51.9	
June	'63	60.4	69.3	69.3	73.8	60.4	52.3	
July	'64	61.3	69.3	69.3	73.4	61.3	52.4	
Sept.	'65	61.1	72.2	72.2	74.2	61.1	53.7	
Sept.	'66	63.1	72.3	72.7	69.0	63.1	52.9	
Aug.	'67	64.3	69.7	69.7	70.3	64.3	54.6	
June	'68	64.2	72.3	72.3	70.4	64.2	56.2	
July	'69	67.7	72.3	72.3	74.5	67.7	59.6	
Interstate Highways								
Aug.	'61	56.7	61.7	60.1	64.0	56.7	52.4	
Aug.	'62	56.7	63.1	58.1	65.6	56.7	53.2	
June	'65	56.7	61.2	60.3	66.3	56.7	52.1	
July	'64	56.3	64.0	62.1	70.8	56.3	55.2	
Sept.	'63	57.3	62.1	62.1	67.1	57.3	53.9	
Sept.	'65	57.3	63.3	62.1	65.3	57.3	53.3	
Aug.	'67	57.3	63.3	62.1	67.1	57.3	57.5	
June	'68	60.3	65.3	65.3	72.8	60.3	55.5	
July	'69	60.2	71.2	70.2	73.6	60.2	61.4	
All Highways								
Aug.	'59	56.5	58.4	57.4	63.5	56.5	48.6	
Sept.	'60	57.3	57.6	57.4	63.7	53.7	50.2	
Aug.	'61	56.9	56.7	57.3	63.4	52.1	51.0	
Aug.	'62	58.2	58.7	58.4	65.1	54.5	51.8	
June	'63	59.0	59.9	59.3	65.2	54.1	51.2	
July	'64	60.3	62.4	61.3	69.2	55.2	54.1	
Sept.	'65	59.9	60.3	60.3	65.7	54.2	53.1	
Sept.	'66	61.3	62.4	62.0	65.0	58.7	53.8	
Aug.	'67	63.9	65.8	64.5	71.1	56.3	55.1	
June	'68	63.8	65.0	64.5	70.9	57.1	56.5	
July	'69	67.3	68.8	67.9	75.1	62.7	59.5	

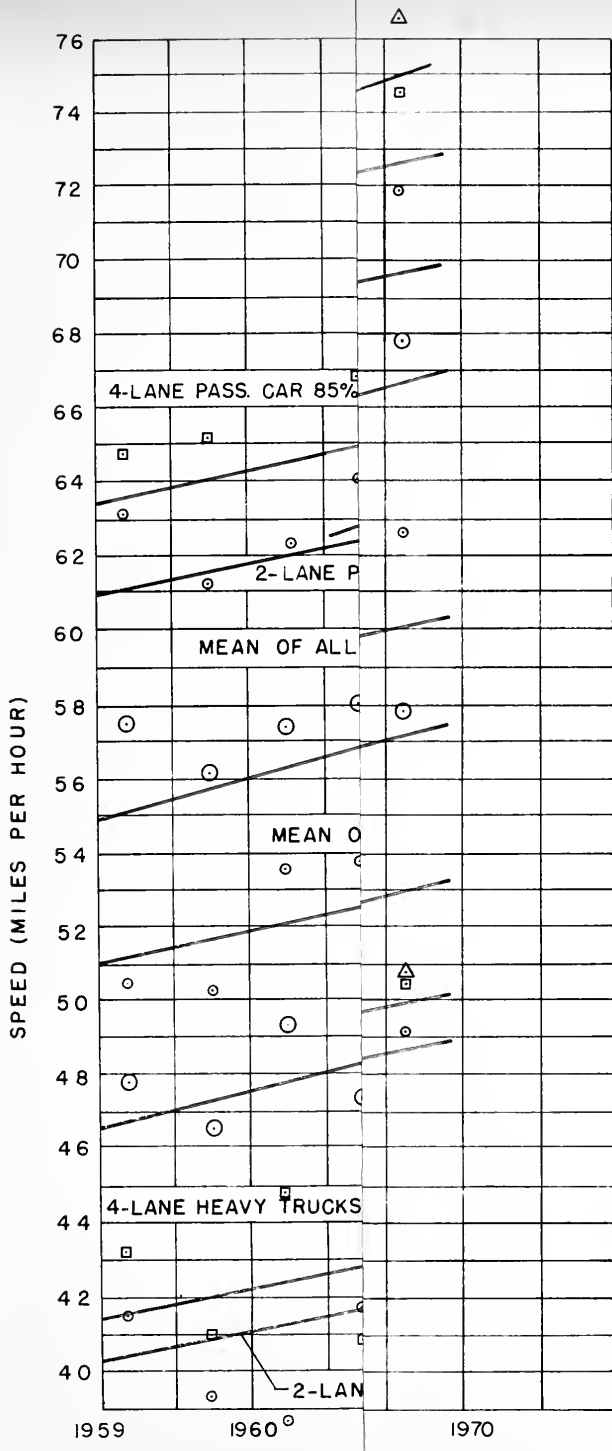
* Data was only for three stations on Interstate highways

TABLE B. SUMMARY OF LINEAR REGRESSION ANALYSIS

Classification	No. of Observ.	b ₀	b ₁	r ²	Q ₂₁	Hypothesis Testing		
						1	0.0	$\beta = 1.0$ $\beta = 1.5$
Interstate Passenger Cars 85%	9	-20.89	1.390	.850	.222	S*	NS**	NS**
4 Lanes Passenger Cars 85%	9	14.79	.94	.790	.142	S*	NS**	S*
2 Lanes Passenger Cars 85%	11	11.77	.956	.841	.124	S*	NS**	S*
Mean of All Passenger Cars	11	- 5.06	1.03	.919	.009	S*	NS**	S*
Mean of All Light Trucks	11	3.25	.874	.802	.135	S*	NS**	S*
Mean of All Heavy Trucks	11	- 9.99	.971	.907	.105	S*	NS**	S*
Interstate Heavy Trucks 15%	9	-12.77	.945	.870	.140	S	NS**	S*
4 Lanes Heavy Trucks 15%	11	- 2.58	.754	.781	.134	S*	NS**	S*
2 Lanes Heavy Trucks 15%	10	- 9.85	.841	.802	.122	S*	NS**	S*

S* Significant @ 5% level of significance

NS Not Significant @ 5% level of significance



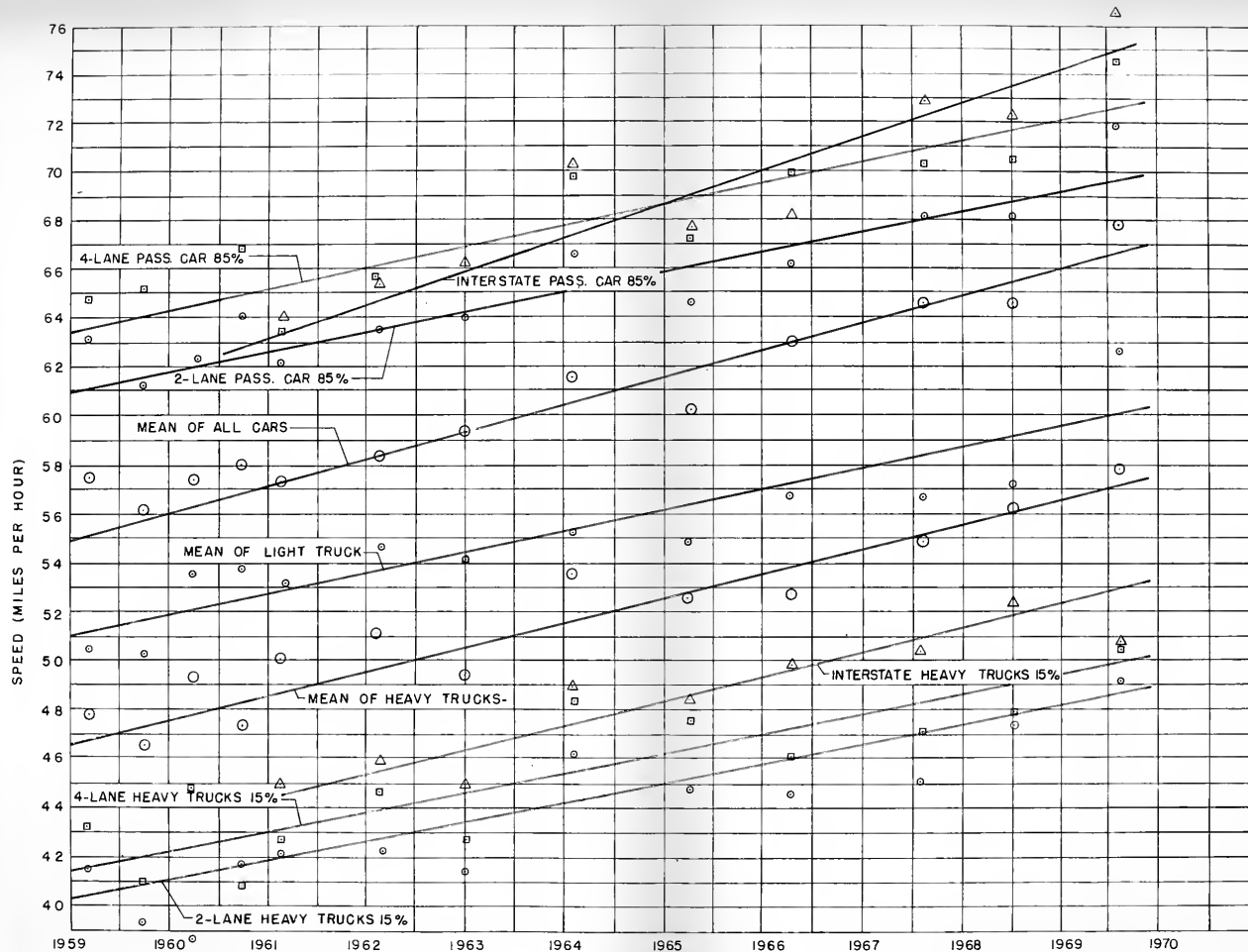


FIG.B - INDIANA RURAL SPEED TRENDS 1959 - 1969

Summary and conclusion

The investigation of the effects of the different speed limits on the traffic flow and the safety of the road network has been carried out. The results show that the speed limits have a significant effect on the traffic flow and the safety of the road network.

The findings suggest that the speed limits should be set at a level that is appropriate for the road network and the traffic flow. The results also suggest that the speed limits should be set at a level that is appropriate for the safety of the road network.

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APPENDIX



Determination of Sample Size

It was desired that a 95% confidence interval of the mean of the speeds of passenger cars should not be wider than two miles per hour. For trucks weighing 5,000 lbs. or more a 95% confidence interval with a four mile per hour band was desired.

Assuming a normal distribution of speeds and using the standard deviation of the grouped data of the 1963 study, the minimum sample size requirements was determined by:

$$N = \left(\frac{2t_s}{L} \right)^2$$

N = sample size required

t = tabulated "t" value for 5/2 significance

S = estimated standard deviation

L = width of the interval

For passenger cars:

$$N = \left(\frac{2 \times 1.96 \times 6.3}{2} \right)^2 = 181 \text{ observations}$$

For trucks:

$$N = \left(\frac{2 \times 1.96 \times 6.3}{4} \right)^2 = 36 \text{ observations}$$

Notes:

At all stations more than 235 passenger car observations and 50 truck observations were obtained for the study reported herein.



TABLE 1 SPEED DATA

Station 1 Highway I-69 Location 3.3 Miles South of S.R. 18

No. of Lanes 4 Type of Surface Portland Cement Concrete Weather Heavy

This Observation August 13, 1969 Last Previous Observation Speed Report No. 86

Date 11:40 - 2:15 p.m. Date July 2, 1968

Time 9:30 - 11:30 a.m. Time

PASSENGER CARS				TRUCKS			
OBSERVATION	All		Non-Indiana		All		5000 pounds or more
	Last	Present	Last	Present	Last	Present	
No. of vehicles obs.	216	248	142	147	74	101	81
Average speed (m.p.h.)	67.4	71.90	66.7	71.3	68.7	72.8	58.6
Standard deviation	6.40	7.01	6.06	6.77	6.84	7.27	5.54
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44 m.p.h.	0.5	0.0	0.7	0.0	0.0	0.0	0.0
49 m.p.h.	1.4	0.0	1.4	0.0	1.4	0.0	0.0
54 m.p.h.	4.2	0.8	4.2	0.0	4.1	2.0	4.9
59 m.p.h.	9.3	5.24	9.2	6.1	9.5	4.0	21.0
64 m.p.h.	29.2	12.9	31.7	12.9	24.3	12.9	54.3
69 m.p.h.	63.0	35.9	69.7	41.5	50.0	27.7	87.7
74 m.p.h.	90.3	64.5	93.0	70.1	85.1	56.4	98.8
79 m.p.h.	96.8	86.3	98.6	89.8	93.2	81.2	98.8
84 m.p.h.	100	96.4	100	98	100	95.1	100
89 m.p.h.		99.6		99.3		100	
No. of vehicles obs.	108	127	70	77	38	50	40
Average speed	67.8	73.2	67.3	72.7	68.6	73.9	59.5
No. of vehicles obs.	108	121	72	70	36	51	41
Average speed	67.0	70.6	66.1	69.8	68.9	71.8	57.6



Station

1.0 Mile West of S.R. 334

Location

I-65

Highway

Station

Fair

Weather

concrete

and Cement

Surface

— THE —

No. of Lanes

Evolution (Speed Report No. — 86 —)
June 26, 1960

Previous

Last

August 8, 1969

Observations

Date

9

PASSENGER CARS												TRUCKS					
OBSERVATION	All		Indiana		Non-Indiana		All		Less than 5000 pounds		5000 pounds or more						
	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present					
No. of vehicles obs.	308	315	203	210	105	105	125	86	25	26	100	60					
Average speed (m.p.h.)	66.5	70.32	65.9	70.1	67.7	70.7	58.4	61.2	59.9	66.0	58.0	59.2					
Standard deviation	6.00	6.89	6.06	7.14	5.70	6.36	5.74	8.93	8.20	9.45	4.92	7.93					
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
39 m.p.h.	0.3	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
44 m.p.h.	0.3	0.0	0.5	0.0	0.0	0.0	0.0	3.5	0.0	3.8	0.0	3.3					
49 m.p.h.	0.3	0.0	0.5	0.0	0.0	0.0	8.0	10.5	12.0	3.8	7.0	13.3					
54 m.p.h.	2.60	0.6	3.0	0.5	1.9	1.0	22.4	24.4	28.0	11.5	21.0	30.0					
59 m.p.h.	11.7	7.9	14.3	8.1	6.7	7.6	58.4	39.5	44.0	23.1	62.0	46.7					
64 m.p.h.	34.1	18.1	37.9	19.5	26.7	15.2	86.4	62.8	72.0	42.3	90.0	71.7					
69 m.p.h.	69.2	41.3	72.4	41.9	62.9	40.0	96.8	81.4	84.0	53.8	100	93.3					
74 m.p.h.	92.9	73.0	95.1	74.3	88.6	70.5	99.2	93.0	96.0	76.9		100					
79 m.p.h.	98.7	93.6	99.0	94.3	98.1	92.4	100	98.8	100	96.2		100					
84 m.p.h.	99.7	97.1	99.5	96.7	100	98.1		98.8		96.2		100					
89 m.p.h.	99.7	99.0	99.5	98.6		100		100		100		100					
No. of vehicles obs.	147	159	100	114	47	45	72	33	16	7	56	26					
Average speed	66.3	69.6	65.9	69.3	67.0	70.4	58.5	58.4	59.9	67.6	58.1	56.0					
No. of vehicles obs.	161	156	103	96	58	60	53	53	9	19	44	34					
Average speed	66.7	71.1	65.8	71.1	68.2	71.0	58.3	62.96	60.0	65.4	57.9	61.6					



TABLE 3 SPEED DATA

Station 3 Highway I-74 Location 1.0 Mile East of Post Road

No. of Lanes 4 Type of Surface Portland Cement Concrete Weather Hazy

This Observation Date August 15, 1969 Last Previous Observation (Speed Report No. 86)

Date June 28, 1968 Date June 28, 1968

Time 9:50 - 12:00 p.m. Time 8:00 - 10:30 a.m.

PASSENGER CARS										TRUCKS					
OBSERVATION	All		Indiana		Non-Indiana		All		Less than 5000 pounds		5000 pounds or more				
	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present			
No. of vehicles obs.	321	264	243	144	78	120	99	77	34	24	65	53			
Average speed (m.p.h.)	66.6	70.19	65.9	69.6	68.8	70.8	58.5	61.60	59.5	64.6	57.9	60.2			
Standard deviation	6.60	7.41	6.66	7.96	5.94	6.65	6.11	7.19	7.00	7.44	5.57	6.71			
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
39 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
44 m.p.h.	0.3	0.4	0.4	0.7	0.0	0.0	3.0	0.0	0.0	0.0	4.6	0.0			
49 m.p.h.	1.9	1.5	2.5	2.1	0.0	0.8	6.1	3.9	5.9	4.2	6.2	3.8			
54 m.p.h.	4.1	3.4	5.4	4.9	0.0	1.7	22.2	16.9	26.5	8.3	20.0	20.8			
59 m.p.h.	10.6	5.7	12.4	6.2	5.1	5.0	56.6	36.4	50.0	20.8	60.0	43.4			
64 m.p.h.	36.5	18.6	40.3	20.1	24.4	16.7	86.9	66.2	76.5	45.8	92.3	75.5			
69 m.p.h.	67.0	46.6	71.6	51.4	52.6	40.8	97.0	87.0	91.2	75.0	100	92.4			
74 m.p.h.	91.0	70.8	92.2	73.6	87.2	67.5	100	96.1	100	91.7	98.1	98.1			
79 m.p.h.	97.5	93.2	98.4	93.1	94.9	93.3		100		100	100	100			
84 m.p.h.	99.4	98.1	99.6	97.2	98.7	99.2		100		100	100	100			
89 m.p.h.	99.6	98.9	99.7	97.9	100	100		100		100	100	100			
No. of vehicles obs.	171	131	123	74	48	57	41	43	14	13	27	30			
Average speed	67.2	69.2	66.5	69.4	69.2	69.0	57.7	62.5	58.9	66.7	57.0	60.7			
No. of vehicles obs.	150	133	120	70	30	63	58	34	20	11	38	23			
Average speed	65.9	71.1	65.4	69.9	68.1	72.5	59.1	60.41	60.0	62.1	58.6	59.6			

Station 4 Highway I-65 7.5 Miles North S.R. 160

No. of Lanes 4 Type of Surface Portland Cement Concrete Weather Hazy

This Observation for August 14, 1969 Last Previous Observation (Speed Report No. 86)

Date 1:15 - 2:30 p.m. Date 1:00 - 3:30 p.m.

PASSENGER CARS										TRUCKS					
OBSERVATION	All			Indiana		Non-Indiana		All		Less than 5000 pounds		5000 pounds or more			
	Last	Present		Last	Present	Last	Present	Last	Present	Last	Present	Last	Present		
No. of vehicles obs.	323	283		154	114	169	169	127	104	29	26	98	78		
Average speed (m.p.h.)	66.8	70.25		66.3	69.6	67.2	70.7	58.4	61.38	62.2	64.6	57.3	60.3		
Standard deviation	6.01	6.91		6.46	7.28	5.72	6.32	5.25	7.96	5.33	8.34	4.67	7.57		
24 m.p.h.	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
29 m.p.h.	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
34 m.p.h.	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
39 m.p.h.	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
44 m.p.h.	0.3	0.0		0.7	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	2.6		
49 m.p.h.	0.6	0.4		1.3	0.9	0.0	0.0	4.7	7.7	0.0	3.8	6.1	9.0		
54 m.p.h.	2.8	1.4		3.9	1.8	1.8	1.2	22.8	18.3	6.90	3.8	27.6	23.1		
59 m.p.h.	11.5	7.1		11.7	7.9	11.2	6.5	53.4	34.6	24.1	26.9	62.2	37.2		
64 m.p.h.	32.5	18.0		37.7	20.2	27.8	16.6	89.8	66.4	65.5	57.7	96.9	69.2		
69 m.p.h.	67.2	44.2		69.5	50.0	65.1	40.2	98.4	86.5	93.1	73.1	100	91.0		
74 m.p.h.	92.0	73.1		91.6	75.4	92.3	71.6	100	95.2	100	88.5		97.4		
79 m.p.h.	98.1	92.2		98.1	91.2	98.2	92.9		98.1		92.3		100		
84 m.p.h.	100	97.9		100	97.4	100	98.2		100		100				
89 m.p.h.		98.9			99.1		98.8								
No. of vehicles obs.	146	141		65	62	81	79	52	61	16	13	36	48		
Average speed	67.2	70.5		66.7	70.1	67.7	70.9	59.0	62.1	62.4	65.8	57.5	61.1		
No. of vehicles obs.	177	142		89	52	88	90	75	43	13	13	62	30		
Average speed	66.4	70.0		66.0	69.1	66.8	70.5	58.0	60.4	62.0	63.5	57.1	59.0		

TABLE 6 SPEED DATA

Station 6

Highway 4

U.S. 52

Location 1.0 Mile East of S.R. 28

Weather Cloudy

No. of Lanes

This Observation Date July 31, 1969

Last Previous Observation Date June 28, 1968

Speed Report No. 86

Top of Surface

Asphaltic Concrete

Weather

Date

9:45 - 12:30 p.m.

1:00 - 3:00 p.m.

PASSENGER CARS										TRUCKS									
OBSERVATION					All		Indiana		Non-Indiana	All		Less than 5000 pounds		5000 pounds or more		Last	Present	Last	Present
					Last	Present	Last	Present		Last	Present	Last	Present	Last	Present				
No. of vehicles obs.					308	251	196	124	112	127	137	70	137	12	35	58	102		
Average speed (m.p.h.)					65.9	70.20	65.1	70.6	67.1	69.8	61.19	55.3	61.19	59.7	64.8	54.3	59.9		
Standard deviation					5.48	6.33	5.45	6.49	5.33	6.16	6.44	6.25	6.44	6.89	6.85	5.76	5.83		
24 m.p.h.					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
24 m.p.h.					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
34 m.p.h.					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
39 m.p.h.					0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.4	0.7	0.0	0.0	1.7	1.0		
44 m.p.h.					0.0	0.0	0.0	0.0	0.0	0.0	0.7	2.9	0.7	0.0	0.0	3.5	1.0		
49 m.p.h.					0.0	0.4	0.0	0.0	0.0	0.8	2.9	15.7	2.9	8.3	2.9	17.2	2.9		
54 m.p.h.					2.3	1.2	3.1	0.0	0.9	2.4	15.3	47.1	15.3	25.0	14.3	51.7	15.7		
59 m.p.h.					10.4	5.6	12.2	5.6	7.1	5.5	38.7	71.4	38.7	41.7	22.9	77.6	44.1		
64 m.p.h.					41.9	14.3	18.5	14.5	30.4	14.2	66.4	94.3	66.4	75.0	31.4	98.3	78.4		
69 m.p.h.					74.0	43.0	77.6	44.4	67.9	41.7	92.7	100	92.7	100	77.1	100	98.0		
74 m.p.h.					95.5	78.9	96.9	75.0	92.9	82.7	98.5		98.5		94.3		100		
79 m.p.h.					99.0	92.8	99.5	91.1	98.2	94.5	100		100		100				
84 m.p.h.					99.7	98.8	99.5	97.6	100	100									
89 m.p.h.					100	100	100	100											
No. of vehicles obs.					148	123	105	62	43	61	75	32	75	4	25	28	50		
Average speed					66.6	71.2	65.8	71.4	68.5	71.0	63.4	56.8	63.4	58.8	65.8	56.5	62.2		
No. of vehicles obs.					160	128	91	62	69	66	62	38	62	8	10	30	52		
Average speed					65.2	69.2	64.4	69.9	66.3	68.6	58.6	54.0	58.6	60.1	62.5	52.3	57.8		





TABLE 8 SPEED DATA

Station 8 Highway U.S. 52 1.0 Mile West of Klondike
 No. of Lanes 4
 Type of Surface Asphalt
 This Observation July 30, 1969 Last Previous Observation July 1, 1968
 Date 1:35 - 2:45 p.m. Date 9:30 a.m. - 12:00 p.m.
 Time Weather Cloudy

PASSENGER CARS										TRUCKS					
OBSERVATION	All			Indiana		Non-Indiana				All		Less than 5000 pounds		5000 pounds or more	
	Last	Present	284	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
No. of vehicles obs.	266	284	284	153	167	113	117	113	117	101	109	25	27	76	82
Average speed (m.p.h.)	65.1	65.49	65.49	64.3	64.9	66.2	66.3	66.2	66.3	57.3	60.00	57.6	62.4	57.1	59.2
Standard deviation	5.74	7.92	7.92	5.88	8.34	5.34	7.22	5.34	7.22	7.2	7.15	8.26	9.60	6.82	6.02
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.9	0.0	3.7	1.3	0.0
44 m.p.h.	0.0	0.7	0.0	0.0	1.2	0.0	0.0	0.0	0.0	5.0	0.9	8.0	3.7	4.0	0.0
49 m.p.h.	0.8	3.2	0.7	0.7	3.6	0.9	2.6	0.9	2.6	14.9	6.4	16.0	14.8	14.5	3.7
54 m.p.h.	4.1	8.4	5.9	5.9	11.4	1.8	4.3	1.8	4.3	33.7	18.4	36.0	18.5	32.9	18.3
59 m.p.h.	12.0	18.3	15.7	15.7	21.0	7.1	14.5	7.1	14.5	52.5	50.5	52.0	33.3	52.6	56.1
64 m.p.h.	46.2	39.8	54.9	54.9	43.7	34.5	34.2	34.5	34.2	87.1	73.4	76.0	51.8	90.8	80.5
69 m.p.h.	76.3	73.2	78.4	78.4	73.6	73.5	72.6	73.5	72.6	94.1	86.2	92.0	70.4	94.7	91.5
74 m.p.h.	97.0	91.9	98.0	98.0	92.2	95.6	91.4	95.6	91.4	100	97.2	100	92.6	100	98.8
79 m.p.h.	98.5	95.4	98.7	98.7	95.8	98.2	94.9	98.2	94.9		100		100		100
84 m.p.h.	100	99.6	100	100	99.4	100	100	100	100						
89 m.p.h.		99.6	99.6	99.4	99.4										
No. of vehicles obs.	122	140	140	77	81	45	59	45	59	35	56	9	14	26	42
Average speed	65.5	66.2	66.2	64.4	65.6	67.3	67.1	67.3	67.1	56.8	61.0	56.1	61.4	57.0	60.8
No. of vehicles obs.	144	144	144	76	86	68	58	68	58	66	53	16	13	50	40
Average speed	64.8	64.8	64.8	64.1	64.3	65.5	65.5	65.5	65.5	57.5	59.0	58.5	63.4	57.2	57.6



TABLE 9 SPEED DATA

Station 9 Highway U.S. 41 Location 1.0 Mile North of Boswell

No. of Lanes 2 Type of Surface Portland Cement Concrete Weather Hazy

This Observation July 17, 1969 Last Previous Observation (Speed Report No. 86)

Date 10:20 - 3:15 P.M. Date June 21, 1968

Time 9:00 - 11:30 a.m. Time 9:00 - 11:30 a.m.

PASSENGER CARS										TRUCKS					
	All			Indiana		Non-Indiana				All		Less than 5000 pounds		5000 pounds or more	
	Last	Present	247	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
o. of vehicles obs.	247	250	247	145	122	102	128	106	146	40	49	66	97		
Average speed (m.p.h.)	59.5	63.46	59.5	58.7	62.6	60.7	64.3	53.8	57.53	52.8	59.5	54.0	56.5		
Standard deviation	7.21	7.57	7.21	7.91	8.09	5.91	6.97	6.13	7.91	7.22	7.77	5.37	7.83		
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	2.5	0.0	0.0	0.0		
39 m.p.h.	0.0	0.4	0.0	0.0	0.8	0.0	0.0	1.9	2.0	5.0	0.0	0.0	3.1		
44 m.p.h.	2.01	0	3.5	3.3	0.0	0.0	0.0	7.6	5.48	10.0	0.0	6.1	8.2		
49 m.p.h.	9.3	4.8	13.1	7.4	3.92	2.3	22.6	22.6	14.4	25.0	10.2	21.2	16.5		
54 m.p.h.	24.7	12.8	30.3	17.2	16.7	8.6	55.7	55.7	32.9	57.5	22.4	54.6	38.1		
59 m.p.h.	47.0	26.0	51.0	29.5	41.2	22.7	82.1	82.1	58.9	82.5	57.1	81.8	59.8		
64 m.p.h.	75.7	53.6	77.9	54.1	72.6	53.1	98.1	98.1	83.6	97.5	75.5	98.5	87.6		
69 m.p.h.	92.3	80.0	90.3	82.8	95.1	77.3	100	100	93.8	100	89.8	100	95.9		
74 m.p.h.	99.2	94.4	98.6	95.9	100	93.0	98.0	98.0	98.0	93.9	98.0	100	100		
79 m.p.h.	99.6	99.2	99.3	100	98.4	100	99.3	99.3	99.3	98.0	100	100	100		
84 m.p.h.	100	100	100	100	100	100	100	100	100	100	100	100	100		
89 m.p.h.															
No. of vehicles obs.	121	128	60	61	61	61	67	60	82	21	33	39	49		
Average speed	60.7	62.3	60.3	61.5	61.2	63.0	54.0	56.3	58.8	54.8	54.6	54.8	54.6		
No. of vehicles obs.	125	122	84	61	41	61	46	46	64	19	16	27	48		
Average speed	58.5	64.7	57.8	63.7	59.9	65.7	52.9	59.1	61.0	52.9	61.0	52.9	56.5		



TABLE 10 SPEED DATA

 Station 10 Highway 2 U.S. 43

2.0 Miles South of Chalmers

 Location
Asphaltic Concrete

 No. of Lanes 2 This Observation July 22, 1969

Cloudy

 Type of Surface
Last Previous Observation (Speed Report No. 86)
Date June 21, 1968

 Time 10:20 - 2:30 p.m.

 Date June 21, 1968
Time 2:00 - 5:00 p.m.

PASSENGER CARS										TRUCKS					
OBSERVATION		All		Indiana		Non-Indiana		All		Less than 5000 pounds		5000 pounds or more			
		Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
No. of vehicles obs.		286	261	245	242	41	19	78	119	33	60	45	59		
Average speed (m.p.h.)		62.8	66.95	62.6	66.9	64.2	67.8	55.0	59.67	55.6	64.0	54.6	55.3		
Standard deviation		7.90	9.11	7.97	9.22	7.43	7.70	7.50	7.69	8.36	7.88	6.78	4.31		
24 m.p.h.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
29 m.p.h.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
34 m.p.h.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
39 m.p.h.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
44 m.p.h.		1.1	0.4	1.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
49 m.p.h.		3.8	0.8	4.1	0.8	2.4	0.0	25.6	3.4	24.2	3.3	26.7	3.4		
54 m.p.h.		15.0	10.0	15.5	10.7	12.2	0.0	48.7	31.9	48.5	11.7	48.9	52.4		
59 m.p.h.		31.1	19.9	32.7	19.8	22.0	21.0	69.2	56.3	60.6	31.7	75.6	81.4		
64 m.p.h.		61.9	38.3	64.1	39.3	48.8	26.3	89.7	74.0	87.9	51.7	91.1	96.6		
69 m.p.h.		81.8	61.3	82.5	62.0	78.1	52.6	98.7	85.7	97.0	73.3	100	98.3		
74 m.p.h.		92.0	82.4	91.8	82.2	92.7	84.2	98.7	96.6	97.0	93.3		100		
79 m.p.h.		97.2	93.1	97.1	93.0	97.6	94.7	100	98.3	100	96.7				
84 m.p.h.		99.0	97.3	98.8	97.1	100	100		100						
89 m.p.h.		99.3	94.5	99.2	98.4										
No. of vehicles obs.		163	124	140	112	23	12	43	61	20	31	23	30		
Average speed		61.7	66.0	61.4	66.0	63.7	65.8	55.5	59.8	54.2	64.2	56.6	55.3		
No. of vehicles obs.		123	137	105	130	18	7	35	58	13	29	22	29		
Average speed		64.3	67.8	64.2	67.6	64.8	71.4	54.4	59.6	57.7	63.8	52.5	55.3		



TABLE 11. SPEED DATA

Station 11 Highway 2 U.S. 31 Location 3.0 Miles South of Rochester Weather Cloudy
 No. of Lanes 2 Type of Surface Asphaltic Concrete
 This Observation Date August 4, 1969 Last Previous Observation (Speed Report No.)
 Date June 24, 1968
 Time 10:25 - 2:00 p.m. Time 1:45 - 4:00 p.m.

PASSENGER CARS				TRUCKS			
OBSERVATION	All		Indiana		Non-Indiana		5000 pounds or more
	Last	Present	Last	Present	Last	Present	
No. of vehicles obs.	282	240	209	176	73	64	
Average speed (m.p.h.)	61.8	64.19	61.2	64.0	63.5	64.7	
Standard deviation	7.09	7.16	6.96	7.41	7.21	6.42	
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	
39 m.p.h.	0.4	0.4	0.5	0.6	0.0	0.0	
44 m.p.h.	1.8	0.8	1.9	1.1	1.4	0.0	
49 m.p.h.	4.6	2.1	5.3	2.8	2.7	0.0	
54 m.p.h.	12.8	8.3	14.4	9.1	8.2	6.2	
59 m.p.h.	32.2	23.3	23.9	22.7	24.7	25.0	
64 m.p.h.	69.2	52.1	74.2	53.4	54.8	48.4	
69 m.p.h.	90.4	77.9	90.9	78.4	89.0	76.6	
74 m.p.h.	97.5	93.3	98.6	92.6	94.5	95.3	
79 m.p.h.	98.2	98.3	99.0	98.3	95.9	98.4	
84 m.p.h.	98.9	100	99.0	100	98.6	100	
89 m.p.h.	99.7		99.5		100		
No. of vehicles obs.	140	110	97	84	43	26	
Average speed	62.5	64.4	62.0	64.6	63.6	63.8	
No. of vehicles obs.	142	130	112	92	30	38	
Average speed	61.0	64.0	60.5	63.5	63.4	65.3	



TABLE 12 SPEED DATA

Station 12 Highway 2 S.R. 25 Location 0.7 Miles West of Americus
 No. of Lanes 2 Type of Surface Asphaltic Concrete Weather Hazy
 This Observation August 18, 1969 Last Previous Observation (Speed Report No. 86)
 Date June 24, 1968
 Time 9:00 - 12:30 p.m. Time 10:00 a.m. - 12:30 p.m.

PASSENGER CARS										TRUCKS					
OBSERVATION	All			Indiana			Non-Indiana			All			Less than 5000 pounds		5000 pounds or more
	Last	Present	Last	Present	Last	Present	Last	Present	Last	Last	Present	Last	Last	Present	Last
No. of vehicles obs.	217	235	186	217	31	18				71	104	35	45	36	59
Average speed (m.p.h.)	61.6	63.82	61.4	63.9	63.0	63.4				54.0	56.50	54.9	59.5	53.2	54.2
Standard deviation	6.79	7.62	6.94	7.54	5.77	8.76				6.57	8.19	7.17	9.41	5.90	6.31
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
39 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0				1.4	1.9	2.9	2.2	0.0	1.7
44 m.p.h.	0.0	0.8	0.0	0.9	0.0	0.0				7.0	4.8	11.4	4.4	2.8	5.1
49 m.p.h.	2.8	2.6	2.7	1.8	3.2	11.1				22.5	13.5	22.8	6.7	22.2	18.6
54 m.p.h.	15.7	11.9	17.7	11.5	3.2	16.7				52.1	41.4	40.0	26.7	63.9	52.5
59 m.p.h.	40.1	24.3	41.9	24.4	29.0	22.2				77.5	68.3	71.4	57.8	83.3	76.3
64 m.p.h.	69.6	55.7	71.0	56.2	61.3	50.0				95.8	86.5	94.3	75.6	97.2	94.9
69 m.p.h.	88.9	78.7	88.7	78.8	90.3	77.8				98.6	90.4	100	82.7	97.2	96.6
74 m.p.h.	95.4	90.6	95.2	91.2	96.8	83.3				100	96.2		91.1	100	100
79 m.p.h.	99.1	98.3	98.9	98.2	100	100					99.0		97.8		
84 m.p.h.	100	99.6	100	99.5						100		100			
89 m.p.h.		100		100											
No. of vehicles obs.	111	130	95	116	16	14				36	63	18	27	18	36
Average speed	61.5	63.5	61.4	63.6	62.1	62.8				55.1	57.2	54.9	61.1	55.3	54.2
No. of vehicles obs.	106	105	91	101	15	4				35	41	17	18	18	23
Average speed	61.7	64.2	61.3	64.1	63.9	65.5				52.9	55.5	54.9	57.1	51.1	54.2

Station 1, 2, 3, 4 Highway Interstate Location See Individual Stations

TABLE 13 SPEED DATA

No. of Lanes Type of Surface Last Previous Observation (Speed Report No. 86)

This Observation Date Date Time

Weather

		PASSENGER CARS						TRUCKS					
		All		Indiana		Non-Indiana		All		Less than 5000 pounds		5000 pounds or more	
OBSERVATION		Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
All vehicles at or less than	No. of vehicles obs.	1168	1110	742	615	426	495	444	351	100	96	344	255
	Average speed (m.p.h.)	66.8	70.62	66.1	70.2	67.9	71.2	58.5	61.36	60.5	65.3	57.9	59.9
	Standard deviation	6.26	7.07	6.34	7.20	5.98	6.75	5.85	7.79	7.27	8.11	5.23	7.13
	24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	39 m.p.h.	0.1	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.3	0.0
	44 m.p.h.	0.4	0.1	0.7	0.2	0.0	0.0	1.4	1.4	1.0	1.0	1.5	1.6
	49 m.p.h.	1.0	0.4	1.5	0.6	0.2	0.2	6.1	6.6	6.0	3.1	6.1	7.8
	54 m.p.h.	3.3	1.5	4.2	1.6	1.9	1.4	22.1	18.8	20.0	7.3	22.7	23.1
All vehicles	59 m.p.h.	10.9	6.6	12.1	7.2	8.7	5.9	55.9	37.9	42.0	21.9	59.9	43.9
	64 m.p.h.	33.4	17.0	37.5	18.2	26.8	15.6	87.4	65.0	72.0	45.8	91.9	72.2
	69 m.p.h.	66.9	42.1	71.0	45.4	59.6	37.8	97.5	86.0	90.0	67.7	99.7	92.9
	74 m.p.h.	91.6	70.6	93.0	73.3	89.2	67.3	99.3	94.9	98.0	85.4	99.7	98.4
	79 m.p.h.	97.9	91.5	98.5	92.4	96.7	90.5	99.8	98.9	99.0	95.8	100	100
	84 m.p.h.	99.7	97.4	99.7	97.1	99.8	97.8	100	99.7	100	99.0		
	89 m.p.h.	99.8	99.1	99.7	98.7	100	99.6		100		100		

TABLE 14. SPEED DATA

Station 5,6,7, & 8 Highway 4 lanes Location See Individual Stations

No. of Lanes This Observation Type of Surface Last Previous Observation (Speed Report No. 86)

Date Date

Time Time

OBSERVATION	PASSENGER CARS						TRUCKS					
	All		Indiana		Non-Indiana		All		Less than 5000 pounds		5000 pounds or more	
	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
No. of vehicles obs.	1103	1078	728	670	375	408	358	484	91	130	267	354
Average speed (m.p.h.)	64.9	67.93	64.2	67.7	66.2	68.2	56.2	59.62	58.4	64.0	55.4	58.0
Standard deviation	6.15	7.65	6.31	7.04	5.61	7.14	6.93	7.72	7.20	8.62	6.68	6.70
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39 m.p.h.	0.1	0.0	0.1	0.0	0.0	0.0	0.8	1.0	0.0	0.8	1.1	1.1
44 m.p.h.	0.4	0.6	0.6	0.4	0.0	0.7	6.4	2.5	3.3	1.5	7.5	2.8
49 m.p.h.	1.2	1.8	1.5	1.5	0.5	2.2	17.0	8.3	12.1	7.7	18.7	8.5
54 m.p.h.	4.8	4.7	6.3	5.5	1.9	3.4	39.1	22.9	29.7	14.6	42.3	26.0
59 m.p.h.	15.7	12.4	18.0	14.6	11.2	8.8	65.9	51.0	51.7	27.7	70.8	59.6
64 m.p.h.	48.9	27.6	54.7	30.3	37.6	23.0	89.7	72.5	78.0	46.9	93.6	81.9
69 m.p.h.	77.8	58.2	80.7	59.0	72.0	56.9	97.2	90.3	94.5	73.8	98.1	96.3
74 m.p.h.	95.6	83.8	96.0	83.3	94.7	84.6	100.0	96.9	100.0	90.0	100.0	99.4
79 m.p.h.	98.4	93.8	98.5	94.0	98.1	93.4		99.4		97.7		100.0
84 m.p.h.	99.8	99.0	99.9	98.5	99.7	99.8		99.8		99.2		
89 m.p.h.	100.0	99.8	100.0	99.7	100.0	100.0		100.0		100.0		

All vehicles
at or less than



TABLE 15 SPEED DATA

Station 9,10,11,12 Highway 2 lanes Location See Individual Stations

No. of Lanes This Observation Type of Surface Last Previous Observation (Speed Report No. 86)

Date _____ Date _____

Time _____ Time _____

Weather Report No. 86

		PASSENGER CARS						TRUCKS					
		ALL		Indiana		Non-Indiana		ALL		Less than 5000 pounds		5000 pounds or more	
OBSERVATION		Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
All vehicles at or less than	No. of vehicles obs.	1032	986	785	757	247	229	353	467	153	197	200	270
	Average speed (m.p.h.)	61.5	64.65	61.2	64.7	62.4	64.6	54.3	57.87	54.4	60.5	54.2	55.9
	Standard deviation	7.38	8.04	7.57	8.31	6.69	7.06	6.72	7.84	7.80	8.55	5.79	6.67
	24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.7	0.0	0.0	0.0
	34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.2	2.0	0.5	0.0	0.0
	39 m.p.h.	0.1	0.2	0.1	0.3	0.0	0.0	1.7	1.5	3.9	1.0	0.0	1.8
	44 m.p.h.	1.3	0.9	1.5	1.2	0.4	0.0	6.5	3.8	9.8	2.5	4.0	4.8
	49 m.p.h.	5.1	2.5	5.7	2.6	3.2	2.2	22.1	10.7	23.5	6.6	21.0	13.7
All vehicles	54 m.p.h.	16.9	10.8	18.5	11.6	11.7	7.9	51.6	33.6	48.4	22.3	54.0	41.8
	59 m.p.h.	37.1	23.3	38.9	23.4	31.6	23.1	76.9	59.7	70.6	50.2	81.0	66.7
	64 m.p.h.	68.8	49.7	71.0	49.8	61.9	49.3	94.6	82.0	92.8	69.0	96.0	91.5
	69 m.p.h.	88.2	74.2	87.6	74.0	89.9	75.1	99.4	91.6	99.4	84.3	99.5	97.0
	74 m.p.h.	95.9	90.1	95.7	89.4	96.8	92.1	99.7	97.4	99.4	93.9	100	100
	79 m.p.h.	98.5	97.2	98.5	96.8	98.4	98.2	100	99.1	100	98.0		
	84 m.p.h.	99.4	99.2	99.4	98.9	99.6	100		100				
	89 m.p.h.	99.7	99.6	99.6	99.5	100							



TABLE 16 SPEED DATA

Station 1 Thru 12 Highway All Systems Location See Individual Station

No. of Lanes This Observation of Surface Last Previous Observation (Speed Report No.)

Date Date

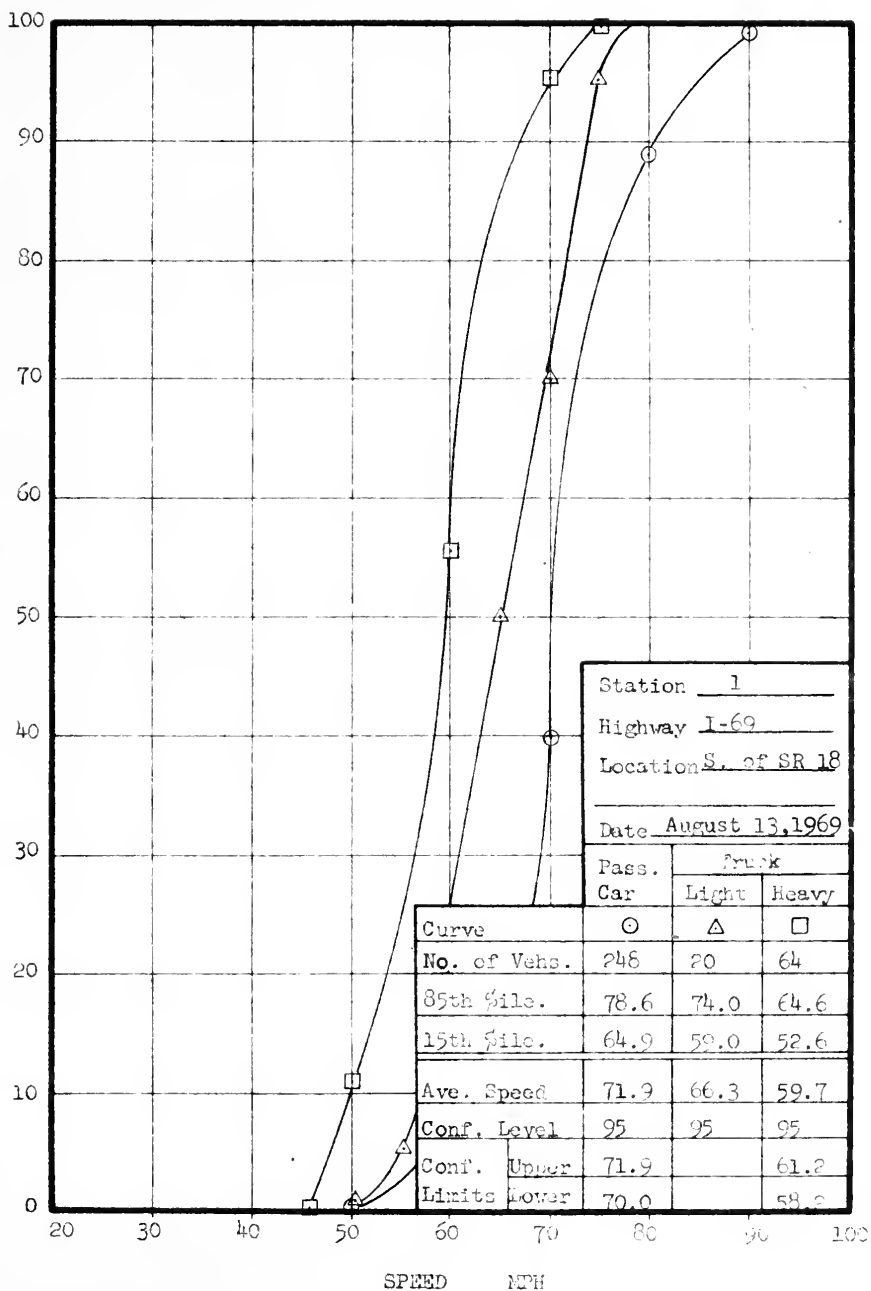
Time Time

Weather

PASSENGER CARS										TRUCKS					
OBSERVATION	All			Indiana			Non-Indiana			All		Less than 5000 pounds		5000 pounds or more	
	Last	Present	3174	Last	Present	2042	Last	Present	1048	Last	Present	Last	Present	Last	Present
No. of vehicles obs.	3303			2255					1132	1155	1302	344	423	811	879
Average speed (m.p.h.)	64.5	67.85		63.8	67.33		66.0	68.79		56.5	59.46	57.2	62.66	56.2	57.92
Standard deviation	6.94	7.95		7.08	8.21		6.39	7.38		6.70	7.90	7.93	8.70	6.08	6.98
24 m.p.h.	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0		0.0	0.0		0.0	0.0		0.1	0.0	0.3	0.0	0.0	0.0
34 m.p.h.	0.0	0.0		0.0	0.0		0.0	0.0		0.3	0.1	0.9	0.2	0.0	0.0
39 m.p.h.	0.1	0.5		0.1	0.1		0.0	0.0		0.9	0.9	1.7	0.7	0.5	1.0
44 m.p.h.	0.7	1.5		0.9	0.6		0.0	0.3		4.5	2.7	5.5	1.9	4.1	3.1
49 m.p.h.	2.4	5.5		3.0	1.7		0.1	1.3		14.4	8.7	15.4	6.2	13.9	9.9
54 m.p.h.	8.1	5.5		9.8	6.6		4.2	3.4		36.4	25.6	35.2	6.6	36.9	30.0
59 m.p.h.	20.7	13.8		23.3	15.6		15.0	10.4		65.3	50.6	57.3	36.9	68.7	57.2
64 m.p.h.	49.6	30.8		54.7	33.9		38.7	25.1		90.3	73.9	82.8	57.0	93.5	82.0
69 m.p.h.	77.2	57.5		80.0	60.5		71.2	52.2		98.0	89.6	95.4	77.3	99.1	95.6
74 m.p.h.	94.3	81.1		94.9	82.6		92.9	78.5		99.7	96.5	99.1	90.8	99.9	99.3
79 m.p.h.	98.2	94.0		98.5	94.6		97.6	93.1		99.9	99.2	99.7	94.4	100	100
84 m.p.h.	99.7	98.5		99.7	98.2		99.7	98.9		100	99.8	100	99.5		
89 m.p.h.	99.8	99.5		99.8	99.3		100	99.8			100				

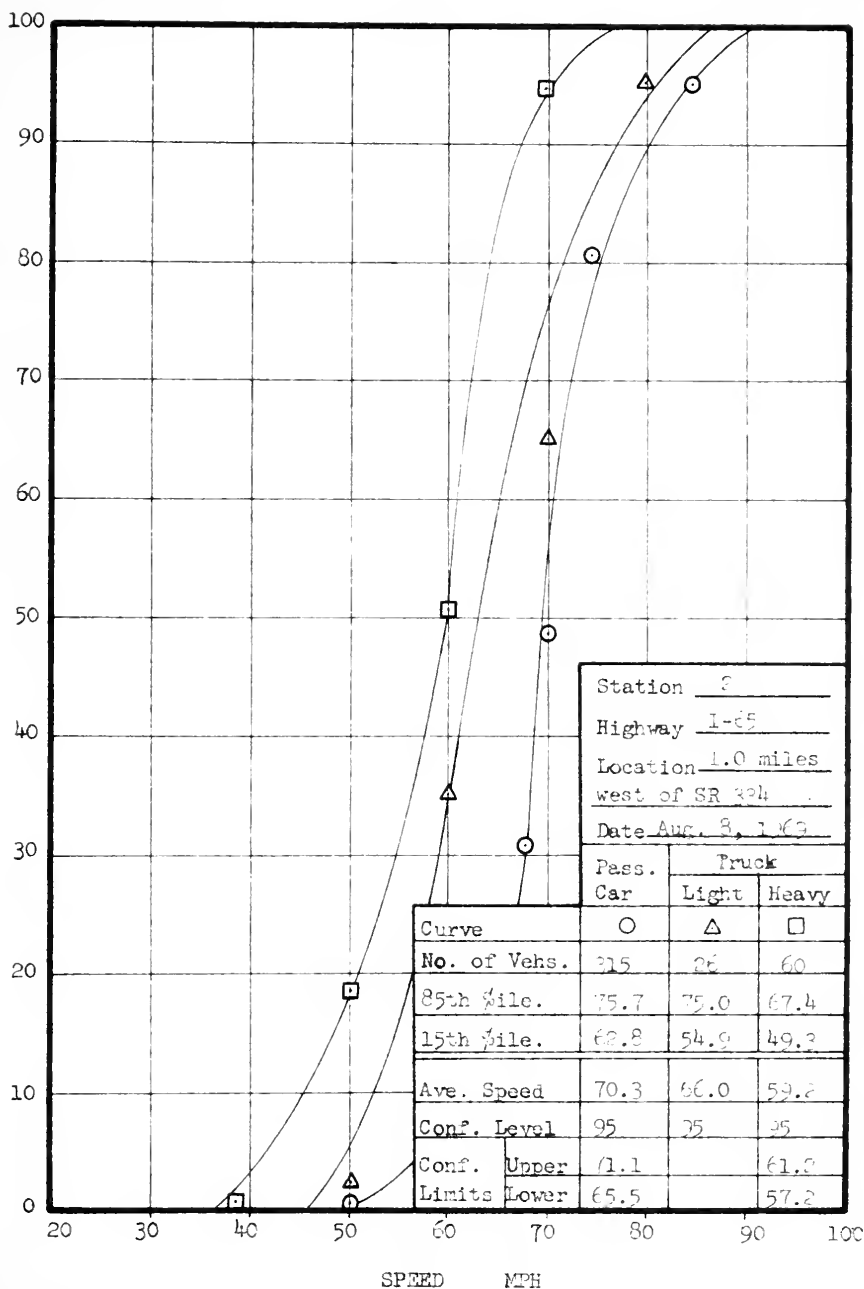
All vehicles
% of vehicles traveling
at or less than

PERCENTILE



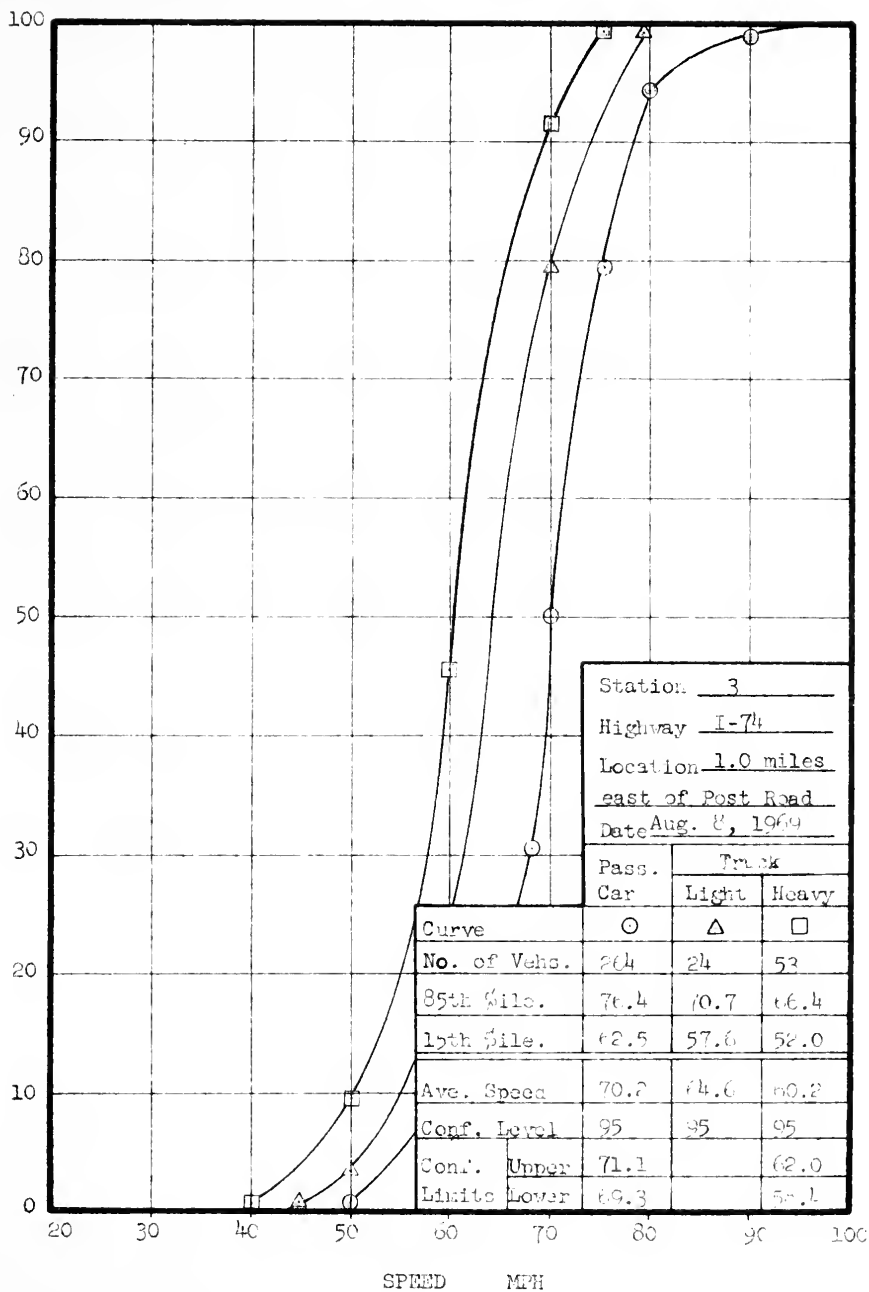


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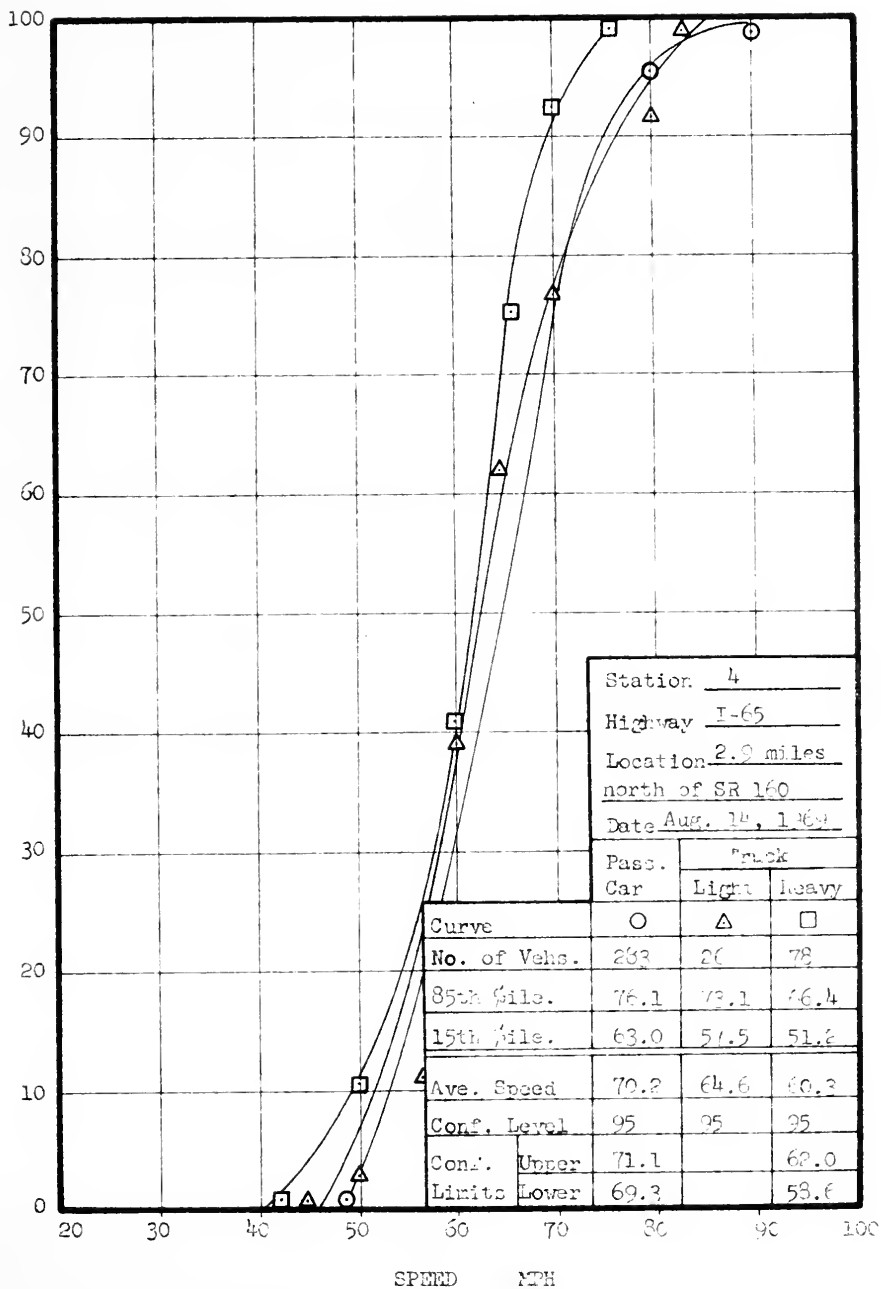


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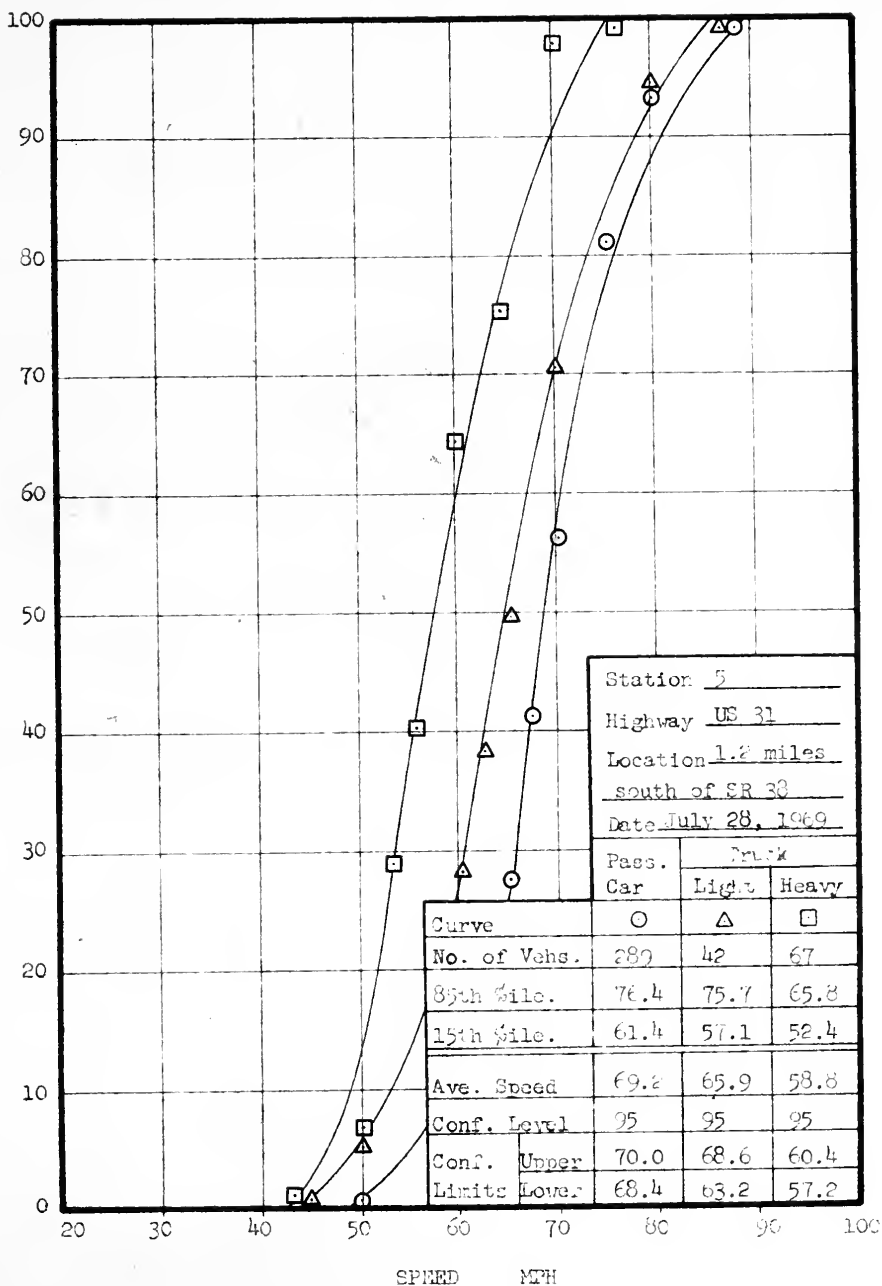


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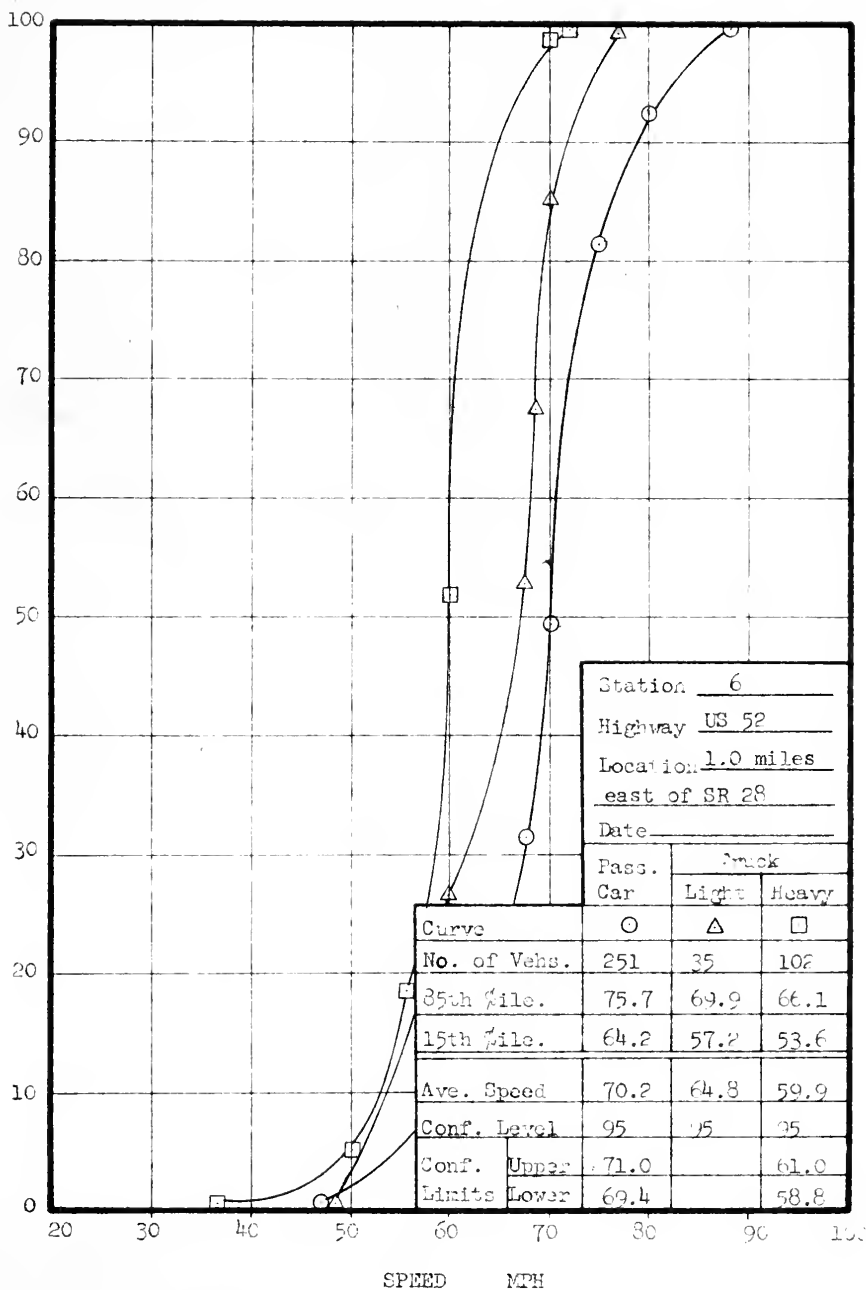


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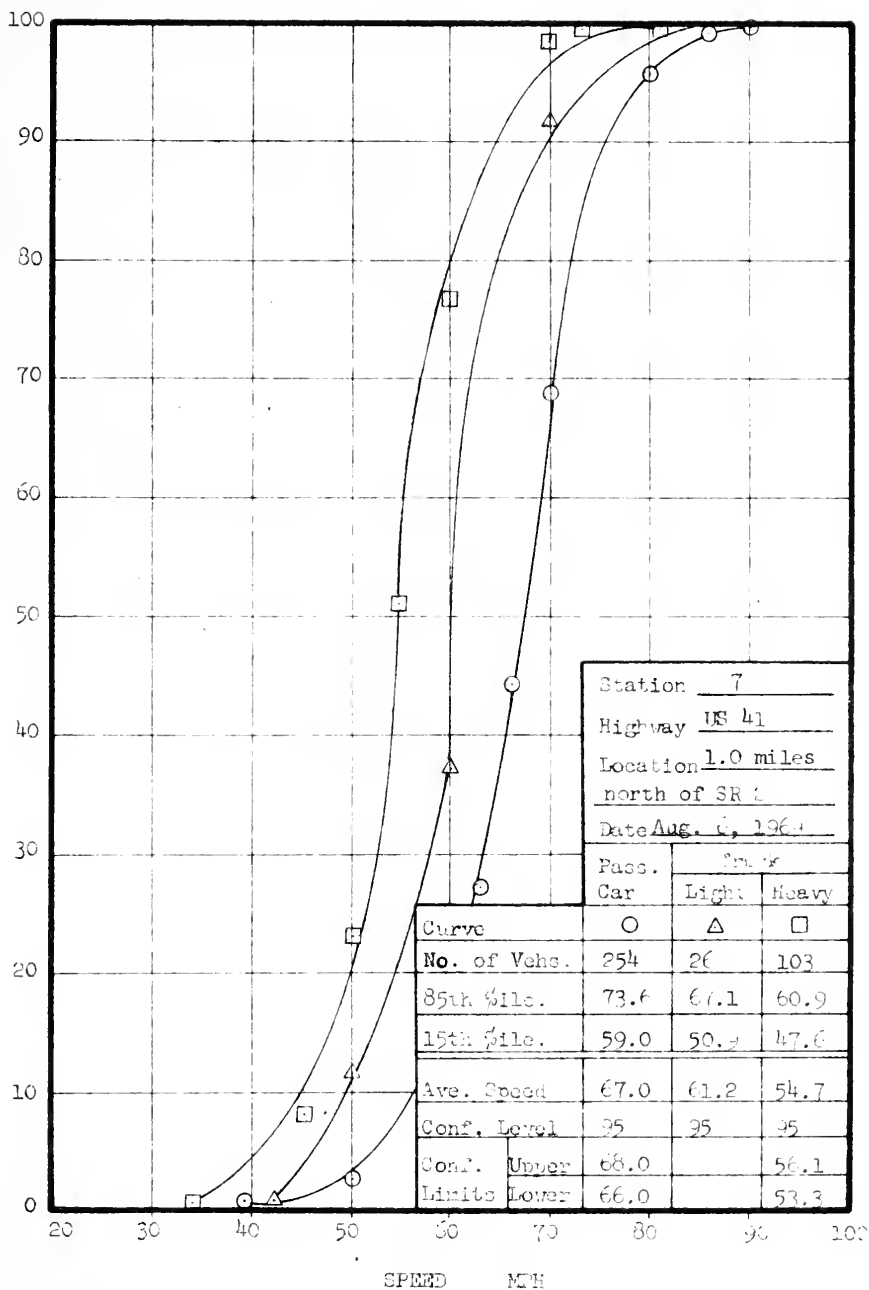




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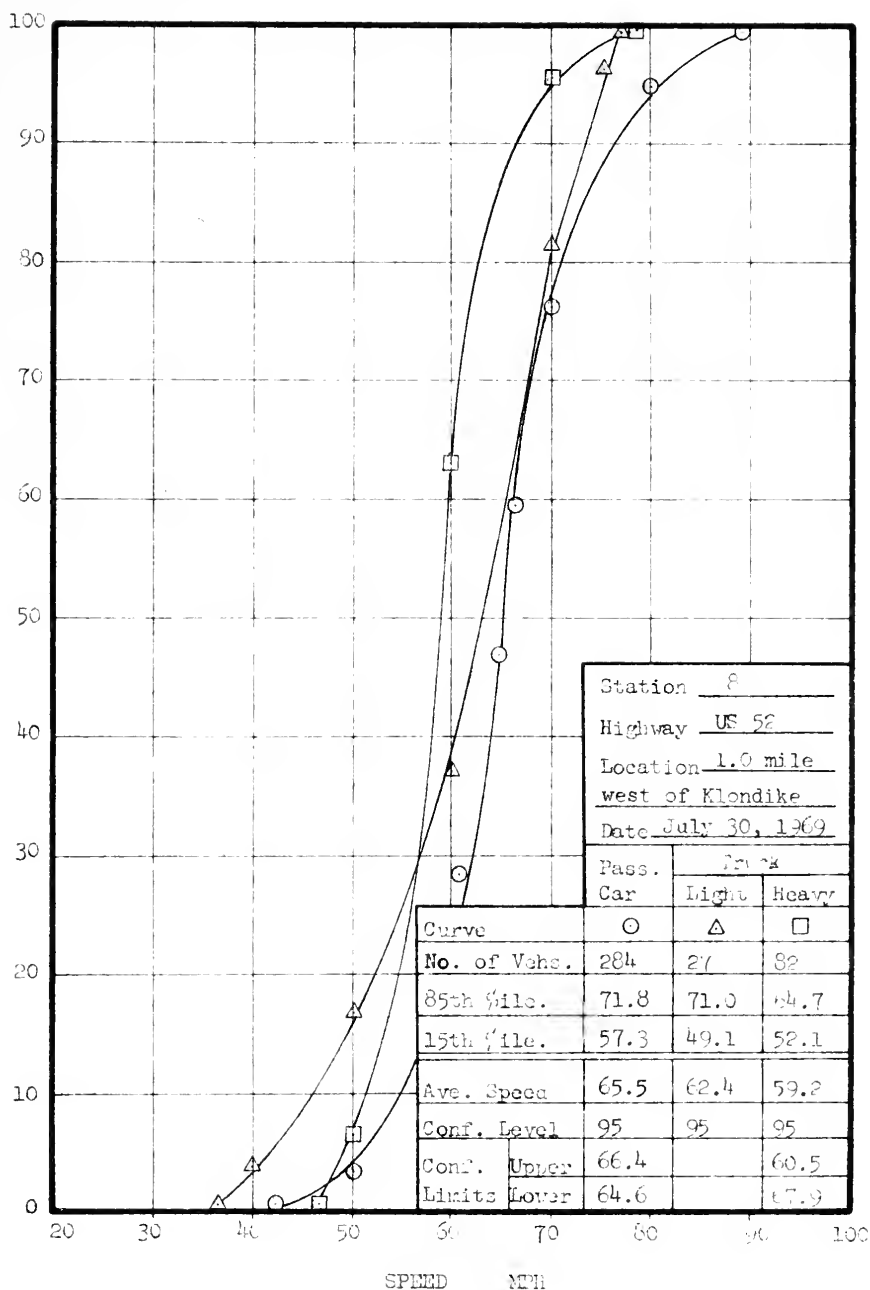


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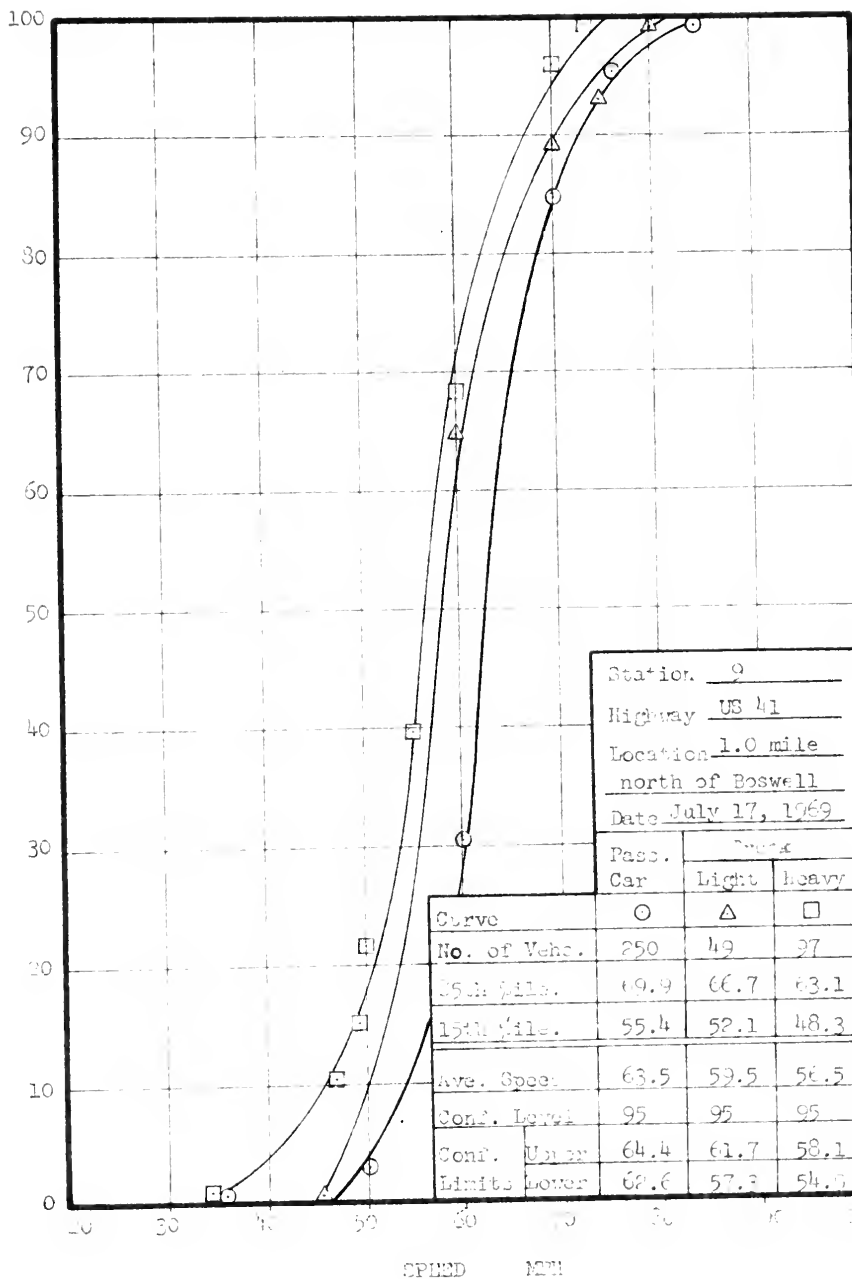


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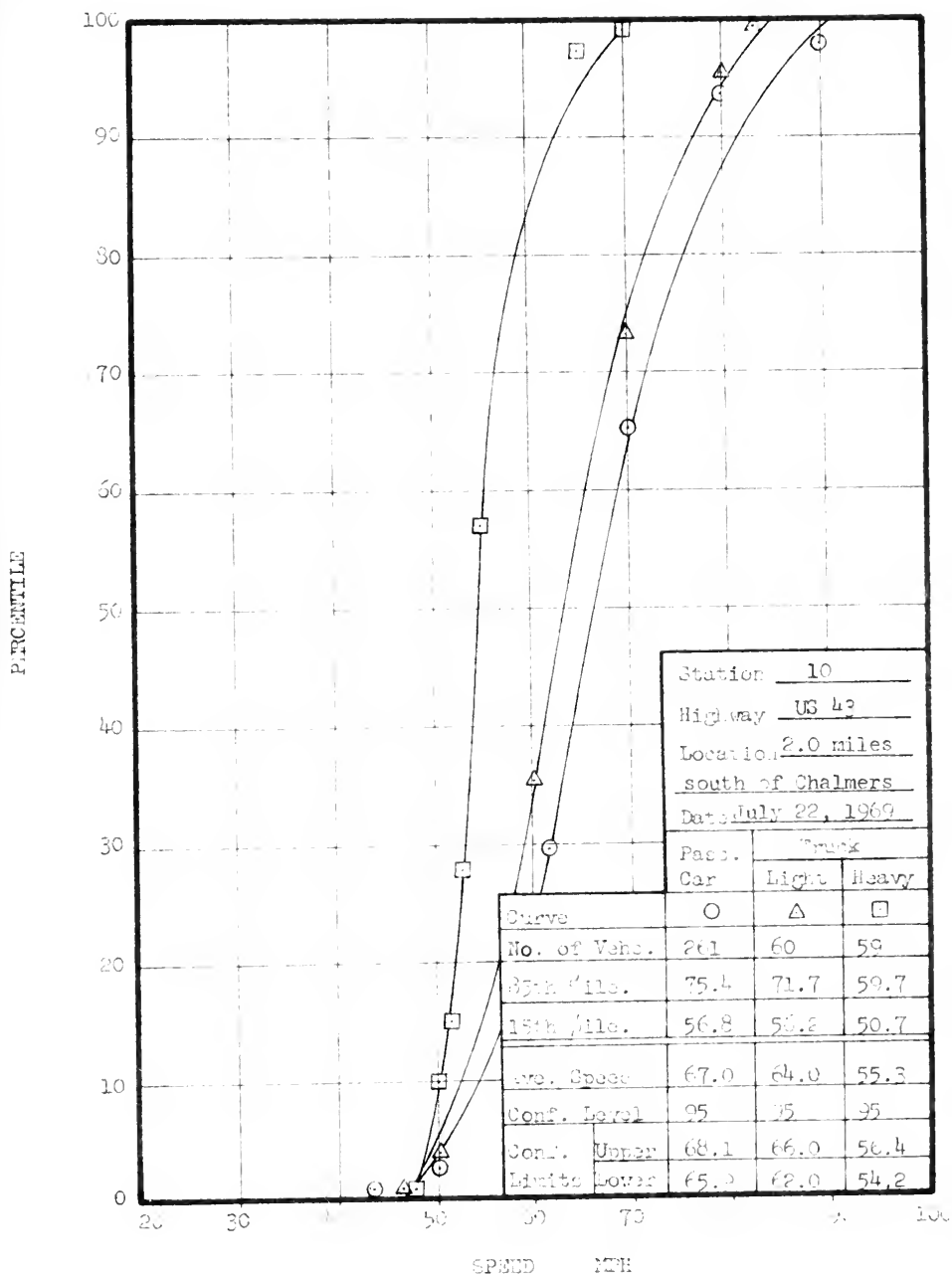


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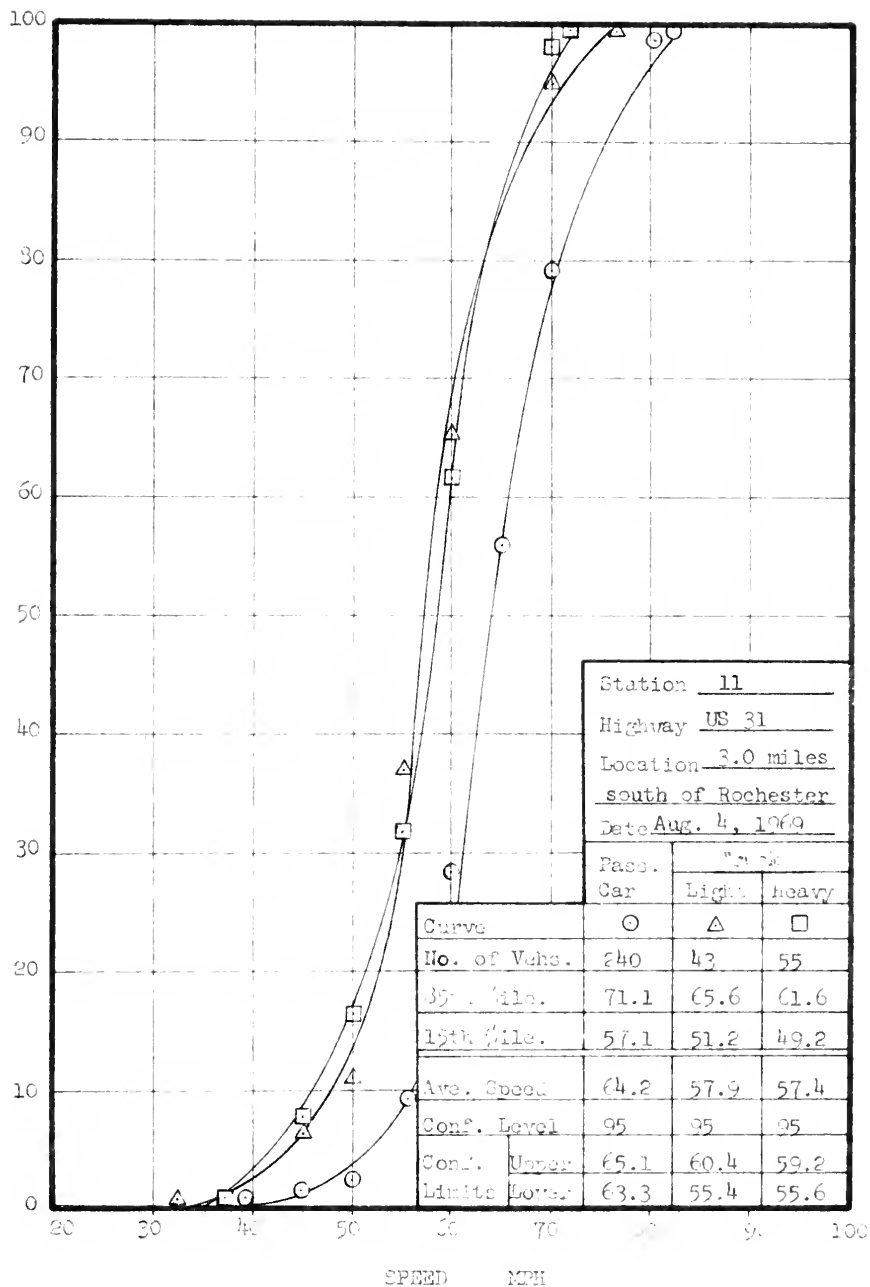
SPEED MPH





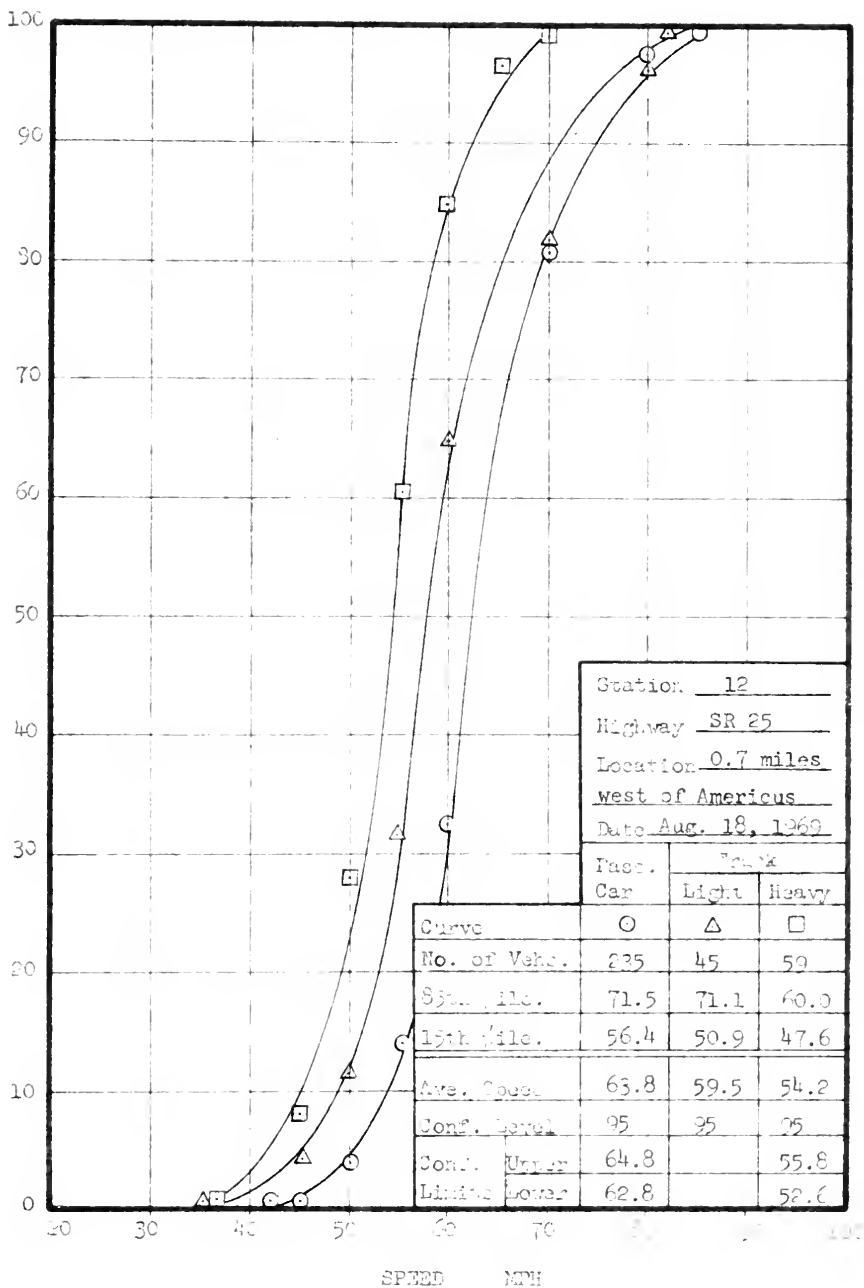


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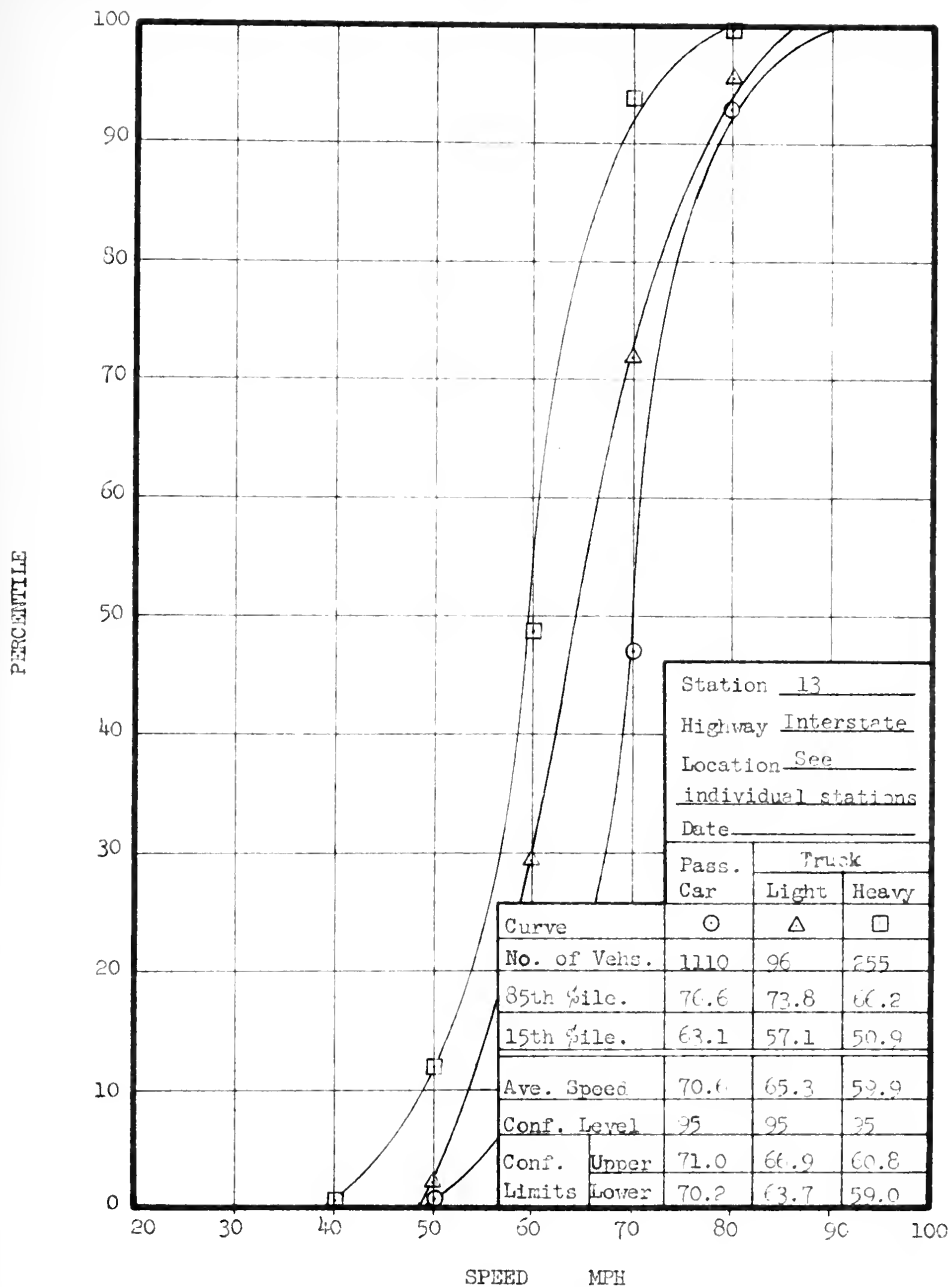


SPEED MPH

PERCENTILE

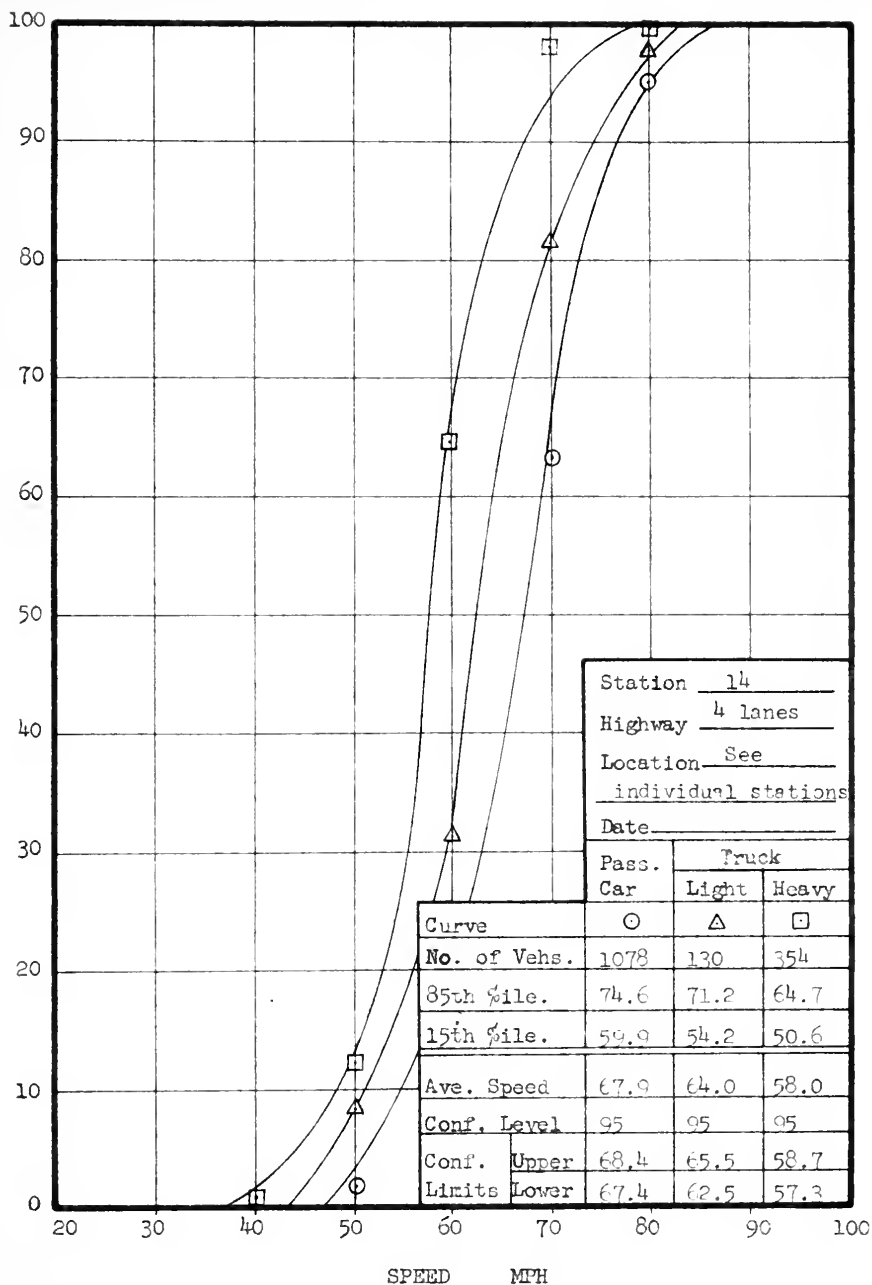






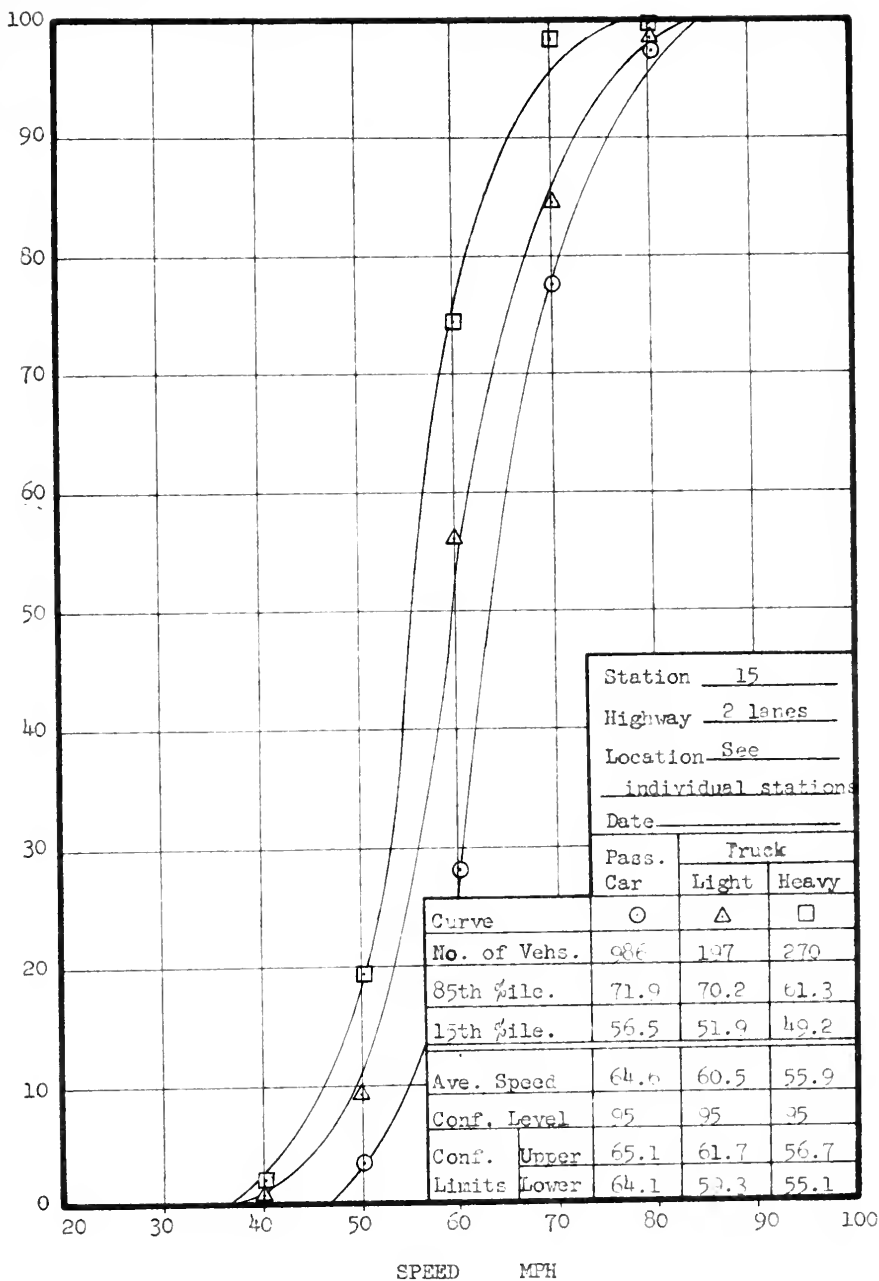


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